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INDEX TO VOLUME L

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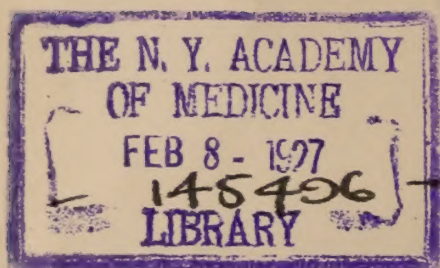
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This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the titles

of papers read, officers elected, etc., can be located in proceedings under Societies, Editorials, News of the State, Marriages, Deaths. The subjects of editorials also appear alphabetically and are marked (E).

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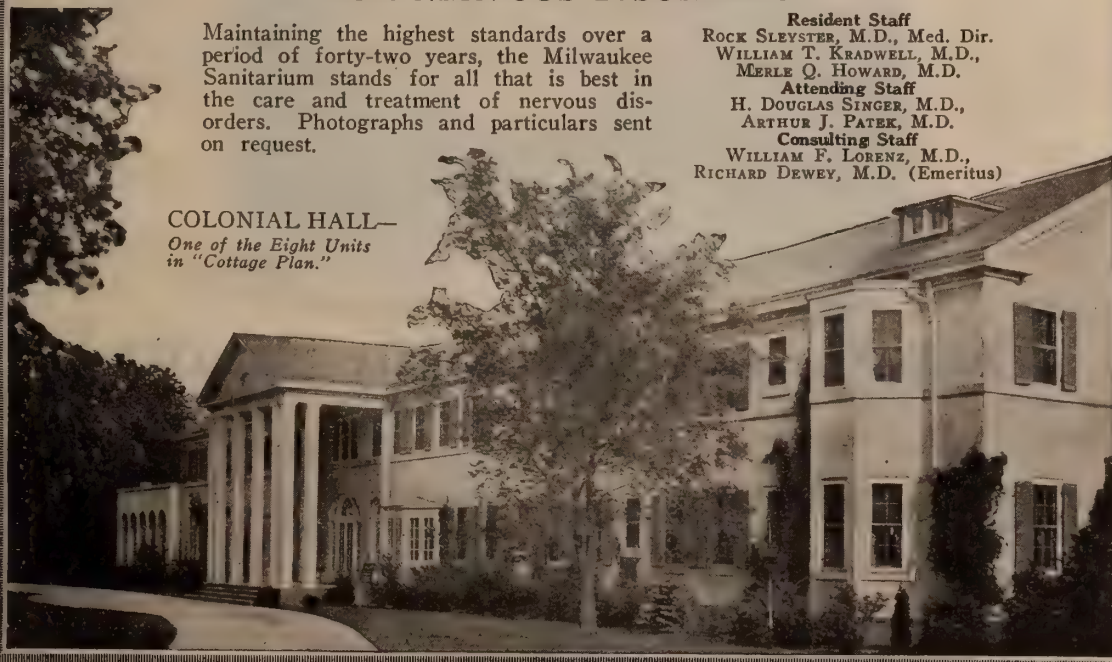
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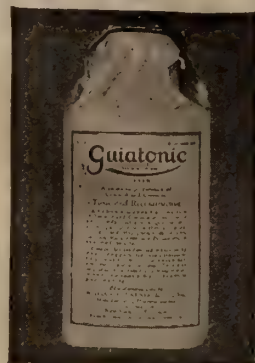


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ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF
THE ILLINOIS STATE MEDICAL SOCIETY

Vol. L

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No. 1

ILLINOIS MEDICAL JOURNAL

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Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

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Editorial

TESTIMONIAL BANQUET GIVEN DR. WHALEN

Dr. Charles J. Whalen, editor of the ILLINOIS MEDICAL JOURNAL, was guest of honor June 12 at a banquet and dance in the Edgewater Beach Hotel, given by the Chicago Medical Society (North Shore Branch). There was an attendance of about 500 guests. Dr. Frank R. Morton made the presentation speech of the night for the handsome pigskin valise that was given to Dr. Whalen, fitted with complete and charming appointments. Every doctor knows how greatly the utility of the gift, as well as its beauty and the spirit of fellowship that accompanied it, was appreciated by the recipient. Dr. William Allen Pusey was toastmaster. Others who spoke and their topics were, "Dr. Whalen as a member of the Chicago Medical Society," Dr. Malcolm L. Harris, president Chicago Medical Society; "Dr. Whalen as a Member of the Illinois State Medical Society," Dr. Mather Pfeiffenberger, president Illinois State Medical Society; "Dr. Whalen as an Executive and administrator" tribute was paid by Dr. J. Warren Van Derslice, ex-president of the Illinois State Medical Society. Dr. Charles E. Humiston, who has served as a president for both the state and for the Chicago Medical Society, discussed Dr. Whalen as an editor and writer and Robert J. Folonie, who is attorney for the Illinois State Medical Society, gave an estimate of Dr. Whalen as a citizen.

From Dr. William D. Chapman, chairman of the council of the Illinois State Medical Society, came a tribute to Dr. Whalen and his connection with medical legislation throughout the United States. The doctor's activities from the Medico-economic standpoint were elucidated by Dr. Edward H. Ochsner, a former president of the Illinois State Medical Society.

THE SHEPPARD-TOWNER MATERNITY BILL MENACE

A bill is pending in the senate committee that would extend for two years the Sheppard-Towner Maternity and Infancy law. Numerous women's organizations have approved it. The House has past it by a decisive majority, despite powerful arguments in opposition.

This bill should be adversely reported by the committee and defeated on the floor of the senate. Five states including Illinois have refused to accept money authorized by the act; there is much evidence that other states have not derived benefits from it. State subsidies is a dangerous movement. It undermines government stability and further federal appropriations for State Aid should be tabooed. No state in the union is too poor to provide for its own needs along educational lines.

We have said repeatedly that senators who condemn the extension of federal aid where no necessity for it exists cannot with any show of logic or good faith vote for the extension of the Sheppard-Towner law.

Equally menacing is the attempt in Washington to establish a federal department of education. This is only another manifestation of the objectionable tendency to extend the obnoxious system of bureaucracy which is menacing not only the national but state governments.

MEMBERSHIP OF THE CHICAGO MEDICAL SOCIETY HAS PASSED THE 4,000 MARK!

THE MEMBERSHIP HAS REACHED THE HIGHEST PINNACLE IN THE HISTORY OF THE SOCIETY

It is with a great deal of pleasure that we report that the Chicago Medical Society at the close of the current year has reached a membership of 4,002.

We are pleased to make this announcement because of the fact that the Chicago Medical Society has now the largest membership it has ever had, although for years it has been the largest County Medical Society in the world.

During the past year the Society has admitted to membership 350 new members, and has re-

ceived 8 transfers from other Societies, making a total of 358 new members.

Chicago Medical Society Bulletin.
June 26, 1926.

ENDOWMENT FOR RESEARCH IN ALIMENTARY TRACT FUNCTION

To encourage investigations of alimentary tract function, Dr. Frank Smithies, Chicago, has presented to the School of Medicine of The University of Illinois, bonds in amount sufficient to yield annually, in perpetuity, not less than \$100.00. This fund is known as "The William Beaumont Memorial Fund" and the income therefrom, as "The Annual Beaumont Memorial Award."

The Award is to be made each year to the research or clinical investigator, who, in the judgment of a Faculty Committee, has contributed the most important work during the year, in the field designated.

The first Award will be made in 1927. Manuscripts covering investigations do not have to be entered specifically for the Award nor is it required that they be submitted to the Faculty Committee. The Award is to be granted by the Committee after it has considered carefully all investigations published during any year in periodicals throughout the United States. Thus, the Award is available to workers in any institution, and is not confined to members of either Faculty or Student body of The University of Illinois.

Illinois State Medical Society OFFICIAL MINUTES OF THE SEVENTY- SIXTH ANNUAL MEETING

HOUSE OF DELEGATES

Champaign, May 18, 1926

The first meeting of the House of Delegates was called to order at 9:27 P. M., May 18, 1926, by the President, Dr. Jacob Krafft.

The President: I will ask the Secretary to call the roll.

The Secretary called the roll and announced that a quorum was present. There were 60 delegates from down state and 40 from Cook County.

The President: The first order of business will be the reading of the minutes of the last meeting.

Dr. J. S. Van Derslice, Chicago: I move that

the minutes of the last meeting as published in the July, 1925, issue of the JOURNAL be accepted as the official minutes. (Motion seconded and carried.)

The President: We will now have the Secretary's report.

To the House of Delegates:

Your secretary reports the collection of the following sums for the balance of the year 1925 and the first four months of 1926. The first figure read being from May 1, 1925, to December 31, 1925, and the second from January 1, 1926 to April 30, 1926.

	1925 1925 1925	1926 1926 1926
Adams	\$ 0.00	\$ 560.00
Alexander	10.00	0.00
Bond	0.00	0.00
Boone	5.00	88.00
Bureau	55.00	165.00
Carroll	90.00	5.00
Cass	5.00	20.00
Champaign	20.00	624.00
Chicago Medical Society	3,330.00	18,765.00
Christian	85.00	205.00
Crawford	45.00	0.00
Clark	20.00	48.00
Coles-Cumberland	10.00	288.00
Clay	70.00	40.00
Clinton	55.00	0.00
Dekalb	65.00	176.00
Dewitt	0.00	96.00
Douglass	20.00	109.00
DuPage	175.00	15.00
Edwards	0.00	40.00
Edgar	20.00	133.00
Effingham	25.00	0.00
Fayette	0.00	32.00
Ford	10.00	88.00
Franklin	55.00	20.00
Fulton	135.00	288.00
Gallatin	5.00	48.00
Gallatin	2.50	176.00
Greene	20.00	24.00
Hamilton	0.00	0.00
Hardin	10.00	104.00
Hancock	210.00	5.00
Henry	35.00	5.00
Henderson	0.00	213.00
Iroquois	50.00	215.00
Jackson	60.00	69.00
Jasper	5.00	168.00
Jefferson	35.00	0.00
Jersey	55.00	0.00
JoDaviss	10.00	0.00
Johnson	560.00	838.00
Kane	15.00	328.00
Kankakee	0.00	40.00
Kendall	95.00	294.00
Knox	0.00	0.00
Lake	358.00	0.00
LaSalle	20.00	0.00
Lawrence	65.00	160.00
Lee	195.00	0.00
Livingston	150.00	162.00
Logan	129.00	103.00
McDonough	125.00	0.00
McHenry	110.00	354.00
McLean	435.00	10.00
Macon	27.50	110.00
Macoupin	24.00	736.00
Madison	60.00	183.60
Marion	5.00	0.00
Massac	70.00	13.00
Mason	20.00	31.00
Menard	0.00	48.00
Mercer	30.00	0.00
Monroe	0.00	196.00
Montgomery	75.00	364.00
Morgan	0.00	0.00
Moultrie	113.00	18.00
Ogle	395.00	538.00
Peoria	105.00	154.00
Perry	40.00	106.00
Piatt	97.50	122.00
Pike	40.00	43.00
Pulaski	20.00	144.00
Randolph	0.00	16.00
Richland	35.00	466.00
Rock Island	555.00	0.00
St. Clair		

Sangamon	60.00	778.00
Schuyler	0.00	80.00
Scott	0.00	0.00
Shelby	15.00	61.00
Saline	60.00	0.00
Stark	0.00	0.00
Stephenson	15.00	288.00
Tazwell	65.00	5.00
Union	5.00	104.00
Vermillion	55.00	461.00
Wabash	60.00	0.00
Warren	35.00	0.00
Wayne	75.00	0.00
Washington	0.00	114.00
White	75.00	0.00
Whiteside	145.00	5.00
Will-Grundy	35.00	5.00
Winnebago	470.00	0.00
Woodford	15.00	112.00
Williamson	15.00	254.00
Subscriptions	114.50	78.00
Exhibits	1,032.50	942.50
Lay-education	10.00	0.00

Total\$11,128.50 \$31,701.50

The figures reported as May to December, when added to the receipts reported to the 1925 House of Delegates, covering the first four months of 1925, make the total for the entire year of 1925:

Receipts from county societies	\$32,991.50
Subscriptions	233.50
Exhibits	1,877.50
	<hr/>
	\$32,102.50

From May 1, 1925, to May 1, 1926, a total of 255 voucher checks were issued for \$61,177.35. These were divided as follows:

General Expense	\$33,973.27
Medico-Legal Expense	9,857.87
Legislative Expense	4,695.72
Lay Education	12,650.69
	<hr/>
	\$61,177.55

Of the general expense, the sum of \$13,940.74 was spent for the printing of the JOURNAL during the year.

Members in good standing May 1, 1925.. 6,577

Members dropped—

By death	68
Non-payment and removals	244
	<hr/>

312 312

6,265

New members

Reinstated

629 629

Membership May 4, 1926..... 6,894

This shows a gain of 317 in membership during the fiscal year.

An audit of the Secretary's and Treasurer's accounts for the past year, ending May 1, 1925, was made by Fred N. Setterdahl Company of Rock Island, Illinois, and reported to the Council in September, 1925. The auditors verified the reports of the Secretary and Treasurer, as reported to the House of Delegates in Quincy last year, showing the same to be correct.

It is the opinion of your Secretary that the increase in dues made last year by the House of Delegates was

entirely necessary and he believes that the annual dues should remain \$8.00 per member for the next fiscal year.

The work of the Lay Education Committee is no longer an experiment and its necessity is shown by the results obtained through the work accomplished. The five basic principles or aims of the committee have been carefully outlined and positive results have been obtained. These aims are:

1. To teach the meaning and necessity of the single standard of medical education.

2. To teach preventive medicine toward which we believe the periodic health examination, medical and dental, is the single greatest step.

3. To achieve a high degree of efficient team-work in health programs with all agencies interested in any phase of the same.

4. To establish in community activities, scientific medical leadership of all lay movements for health.

5. To hold back in every way possible State Medicine in every form and prevent all legislation toward that end—this being done through the component societies assuming the community responsibilities for public health.

Among the many state medical societies in our country, the Illinois State Medical Society is considered the pioneer in this form of educational work, and many of them are now attempting in some way to formulate their own programs. It is the opinion of your Secretary that the work should continue, especially along the lines already adopted by our most efficient committee.

In closing, I wish to take this opportunity of thanking the many secretaries of our component societies for the fine spirit of cooperation shown during the past year and again wish to emphasize that we should all realize that the County Medical Society is the real basic unit of all medical organization and that we should all endeavor to not only retain our membership but to gradually increase it until every eligible and reputable physician in Illinois will be enrolled on our membership list.

Respectfully submitted,

HAROLD M. CAMP,
Secretary.

Dr. E. E. Perisho, Streator: I move that the report be adopted. (Motion seconded and carried.)

The President: We will now have the report of the Treasurer.

TREASURER'S REPORT

Dr. A. J. Markley, Treasurer.

For period of May 16, 1925 to May 15, 1926.

	General Fund	History	Medico- Legal	Legis- lative
Balance May 16, 1925	\$22,344.95	\$311.28	\$ 8,243.40	\$ 5,867.23
Received from Secretary	22,544.31	.....	12,178.09	8,107.60
Received from Journal	15,500.00	.....	.....	.....
Total	\$60,389.26	\$311.28	\$20,421.49	\$13,974.83
Disbursements				
Vouchers cashed...	48,436.46	116.00	9,857.87	4,929.21
Balance on hand...	\$11,952.80	\$195.28	\$10,563.62	\$ 9,045.62

Dr. J. S. Nagel, Chicago: I move that the report be received. (Motion seconded and carried.)

The President: The next order of business is the report of the Chairman of the Council.

REPORT OF CHAIRMAN OF COUNCIL

DR. W. D. CHAPMAN: The Council regrets to report the death of one of its members during the year. Shortly after the 1925 meeting Dr. M. P. Parrish, who had been elected a member of the Council at this meeting, passed away.

The Council has had a full and active year. In very many ways during the past year there have come to fruition several of the hopes for which we have worked. The standing of our State Society at the present time in the public mind seems to be better than at any time during the past several years and indeed we have been active in combating several measures which seemed inimical to the medical profession. The policies of the Council have been exactly in consonance with the policies laid down by the Society in the past year. The methods of applying these policies have been brought down to date and changes have been minor except in the matter of co-ordinating the different agencies. This year's Council has been able to coordinate the activities of its several committees and we find the work of the Lay Education Committee and the Council as a whole coordinating much better and dovetailing more closely than has been the case in the past. We have made some mistakes but we hope these are not serious. The Council is open to suggestions and desires help.

Six meetings were held during the year between the 1925 session of the House of Delegates and the present one. Routine business proceeded without unusual occurrence. During the year some arrangement by which Grundy and Kendall counties might be able to work with the Third District seemed desirable. That arrangement was made by the Council with the agreement of the counties concerned. Along that line of districting, it has seemed to the Council that the time has come when it would be wise to create a new district, the Tenth, to be made up of the counties that now comprise the Ninth District. That district at present contains twenty-three counties. The House will hear about this more fully from the Councilor of the Ninth District.

The increase in dues which was allowed by the 1925 House of Delegates has been apportioned between the work of the three committees, Lay Education, Medico-Legal and Legislative. In each of these committees there has been a need of an increased supply of funds and it has seemed to the Council at the present time that the supply is adequate.

One policy of the Council which might be described as new has been the institution and adoption of postgraduate service for the county societies. That service is growing in capacity and in popularity. The Council through its postgraduate service committee in cooperation with the Lay Education Committee is de-

sirous of seeing it extensively used by the county societies for the coming year.

At one time during the year the time seemed right to institute activities relative to some method of handling the abuse of expert medical witnesses in our courts. The Council initiated a resolution which seems to be bearing fruit. We have heard several times since that the resolution was adopted by other institutions and is in active practice in courts of law.

The Council recommends the institution of another scientific section.

For the rest of the work of the Council it has been largely a year of harvesting of the efforts of past years.

For the future the Council recommends the continuation of the policy which has made much work for the Council and Secretary in the past, the handling of all State Medical activities. One of these activities was mentioned by Dr. Neal in the Secretaries' Conference this morning. I hope each one will read it when it appears in the JOURNAL. That one had to do with the law which was passed by the National Congress in 1923 which provided at government expense free treatment for any ailment which occurs now or in the future in any veteran who was in any engagement, military or naval, since 1917. To most of us that would look like class legislation; if from 1917 why not for all veterans? As it stands at the present time the Government of the United States will be willing and does offer medical care of any nature whatever to any veteran who comes within this certain specified class. That is state medicine. There are about four million veterans coming within that class and there is good reason to expect that the time will come when that might have a serious effect economically on the members of the medical profession at large. There are other phases of state medicine activities which will continue to come before the Society and to which it is the honest wish of the Council that members of the Society be definitely and fully aware of at all times, particularly with the present minor legislative annoyances concerning which the Legislative Committee will report more fully, continuing to be with us. Just now one in particular upon which the Council recommends a resolution by the Resolutions Committee has to do with the further restrictions upon the Federal Narcotic Law, which in the past has caused annoyance for members of the medical profession and which as now proposed will make additional hardships.

The matter of lay health officers has been before the Council all during the year and will be for the next year. It is advisable and the Council certainly urges that every member of this House and every member of the State Medical Society keep himself fully informed of the progress of the work of lay health officers in the United States. As you know, some institutions are educating students and giving them a degree of Doctor of Public Health. We should do our utmost to combat this movement. The American Public Health Association is largely responsible for this.

It is a pleasure to report that during the past year the Society has been informed by the American Medical Association that the last apportionment entitles us to two additional delegates. That means increased membership and is gratifying because it means increased representation in the American Medical Association's House of Delegates, where the Illinois delegates have for several years past taken an active part, and have at times wielded the balance of power.

DR. J. W. VAN DERSLICE, Chicago: I want to add something to the Council's report. In every debate on the American Medical Association floor the Illinois delegation has cast the deciding vote in the last four years. We have not voted on the losing side in the last three years.

(It was moved that the report be adopted. Motion seconded and carried.)

REPORT OF THE COUNCILORS

1. Dr. D. B. Penniman, Rockford, reported for the First District as follows:

I have the pleasure to report that the First District is in splendid condition. Every county society is functioning. We have several small county societies which are not able to hold as many meetings as the larger societies. There will be meetings at which not more than two or three doctors are present, but even these smaller districts have at least two meetings a year. One of our societies had a splendid program last fall to which they invited the neighboring doctors and there were 240 registered at the meeting. The other societies have done very well. The plan of having three or four meetings, of having a luncheon, a good social time and a good scientific meeting has contributed largely to the attendance.

2. Dr. E. E. Perisho, Streator, reported for the Second District as follows:

Six of the counties are well organized and doing good work. We have four counties in this District which, because of their location with only a few doctors in each town, have been unable to keep organized. Two of these are Marshall and Putnam. They have asked to join with Peoria or LaSalle. Most of these doctors go to either of these places to meetings. Kendall and Grundy have asked to join with Will County to which they are associated very closely. We have given them permission to do this and we have also transferred them to the Third District. My policy is to keep all the different counties well informed as to the work of the Council and of the doings of the State Medical Society. I have visited almost all of the counties the past year and I keep in communication with them. I keep them informed of the legislative work that is being done. Every one of them has been very faithful to report on the legislative work. I think Dr. Neal will agree with me that my district is fairly well organized in a legislative way. The recent primary campaign was better than

previous ones. Almost all of our members welcome the increased fee for dues and I have heard no complaint. They are also very enthusiastic about the lay educational work. Most of the counties have made use of the speakers, so everything is working well in the Second District.

3. Dr. S. J. McNeill, Chicago, reported for the Third District as follows:

The Third District is composed of Lake, DuPage, Will, Kendall, Grundy, Kane and Cook Counties. Will, Grundy and Kendall Counties report a very successful year. Kendall County has a membership of 43 active members, 8 non-members who should be members. They meet every month excepting during July, August and September. They also have a club in connection with the County Society which is very good and which increases the membership.

DuPage County has a membership of 50 and they report 100 per cent. attendance. This seems to be about the most lively society outside of Cook County. They have had 122 meetings since 1919. On account of Grundy and Kendall Counties having a small membership they ask to be associated with Will County. This permission was granted. Lake County has been very inactive in the last year. They have had two or three malpractice suits. They have a membership of 49 but only had three meetings during the year. There will have to be some missionary work done there. What the cause of this lack of attendance and enthusiasm is I have been unable to find out.

The Chicago Medical Society has the largest membership this year that it has ever had, about 4,000. We have taken in this year a little over 300 new members. We have had a number of deaths. I think the Chicago Medical Society has done more work this year than ever before. We have 15 branch societies that meet once a month. The Central Society meets every week except during July, August and September. The Council of the Chicago Medical Society takes care of all the business that is transacted. It meets once a month.

4. Dr. W. D. Chapman, Silvis, reported for the Fourth District as follows:

The Fourth District can duplicate the reports that have been made for the other districts. We have some societies which are active and others which meet only once during the year. That with some of us is a source of regret and we are endeavoring to stimulate activity in those societies to the point where the meetings will become more frequent. There are other things which might be reported but they are of lesser importance.

5. Dr. S. E. Munson, Springfield, reported for the Fifth District as follows:

I have visited all the counties in my District. This being my first year in the Fifth District I thought the better way to find out some of my responsibilities and duties was to call upon the men and talk over their problems and see how they were functioning as a scientific body and also toward the public welfare work in their community, as well as their attitude toward the public welfare work laid out by our Lay

Education Committee. Two things we have endeavored to stimulate in these organizations; one, increased membership and the other, cooperation or coordination for the main good. I think the best way of keeping down discord and ill feeling in a county medical society is by the men working together. I find that the men in my District are interested in this. I have a definite report on the eligible doctors in my District who are not members. I think with a little work this list can be reduced considerably.

DeWitt County—Licensed physicians in county (as per directory) 22
Number members in County Society..... 14

A meeting of the DeWitt County Medical Society was held at Clinton, May 7, with a dinner at noon. Almost every member was present. This society is fortunate in having one of its members as the mayor and another as president of the school board.

A request by the Parent-Teachers' Association of Waynesville to the State Board of Public Health to send someone to examine the school children was brought to the attention of your councilor after the matter had been referred to Miss Keller. After a great deal of effort and correspondence it was successfully accomplished during the week of May 3 by the physicians of Waynesville, with the assistance of the DeWitt County Medical Society. The society was complimented on account of this achievement.

There should be more intense organization by the society, with more frequent meetings, that greater progress may be made along scientific lines and welfare work in the community. This is a society with splendid opportunities and capable of doing very excellent work.

Ford County—Licensed physicians in county (as per directory) 23
Number members in County Society..... 17

On May 7, after a dinner, a talk was made to the members of the Ford County Medical Society. This is one of the counties with a small membership. It is in need of more frequent meetings to create greater scientific interest, as well as meeting the problems of lay education work in this community.

One of the members of this County Society, located at Melvin (Dr. Boshell had examined the school children from nine country districts. This is certainly a very creditable piece of lay education work done by this member.

The school children at Gibson City were examined by a physician and nurse sent by Dr. Rawlings, at the request of the local men. Dr. H. W. Trigger, the secretary of the society, is deeply interested in the work of his society and with his efforts no doubt much will be accomplished in the coming year.

Iroquois County—Licensed physicians in county (as per directory) 46
Number members in County Society..... 17

An invitation was extended to your councilor by the Iroquois County Medical Society to a dinner given by Dr. Buckner, of Gilman, on July 23, 1925, with the

members of the society as his guests. Dr. J. R. Neal was present and his talk along legislative lines was well received. Dr. Buckner is certainly a fine host and the society put over a splendid scientific program—subject, "Focal Infection."

Logan County—Licensed physicians in county (as per directory) 42
Number members in County Society..... 28

Logan County Medical Society was visited on April 29. Seventeen members were present. Splendid interest was manifested in the work of the Lay Education Campaign and also in the legislative work as presented by Dr. J. R. Neal, who made a very able talk on this subject.

This society is very active in lay education work and has given assistance to other towns in the county in work of this kind, as well as the Baby Conference held at Atlanta during their county fair last fall.

We had a fine dinner and a cordial reception at this excellent meeting. This is certainly one of the live societies in the Fifth District.

Mason County—Licensed physicians in county (as per directory) 19
Number members in County Society..... 15

The councilor visited a meeting of the Mason County Medical Society at Easton, on May 3, accompanied by Dr. J. R. Neal and Dr. Isaac D. Rawlings. There was a very good attendance. There are fifteen members in this society, this being one of the small counties in the district, with only nineteen licensed physicians, which includes about all the eligibles in the county.

The matter of the Baby Conference, sponsored by the Woman's Club at Mason City, is considered for the County Fair this year. After a talk along the lines of lay education work, there was a general discussion of the members in regard to their attitude toward public welfare opportunities.

Dr. Neal and Dr. Rawlings were met with a cordial reception and made talks along the lines of medical organization, legislation and preventive medicine.

With more frequent meetings and closer cooperation this society will be well prepared to meet the responsibilities in lay education work in Mason County.

McLean County—Licensed physicians in county (as per directory) 107
Number members in County Society..... 75

By invitation of the McLean County Medical Society, your councilor, accompanied by Dr. Isaac D. Rawlings, attended their meeting of November 17. The meeting was well attended and an interesting paper was read by

Dr. Harold M. Camp, Secretary of the State Society. The problems of the lay education work was discussed, after which Dr. Rawlings made a very good talk on preventive medicine.

The Society is fortunate in having a very capable and aggressive secretary in the person of Dr. P. E. Greenleaf, who is well informed, as I have found by correspondence, in the lay education work in his community. This is a strong society, able to meet the problems of lay education work in their community, with interesting scientific programs.

Menard County:

Licensed physicians in County (as per directory).. 14
Number members in County Society..... 8

Menard County Medical Society was visited on April 30. Five members were present. There are only eight members in this society. Two or three members in this county, just over the line of Sangamon County, have affiliated with the Sangamon County Medical Society some years ago.

The subject of the Lay Education Campaign was presented by your Councilor, as to the examination of the pre-school child, the examinations of the school children, and the adult health examinations. Also re-organizing the men in this county that they may be better fitted to care for the work outlined by the Lay Education Committee in this community. There was much interest manifested and promise of endeavor along this line. Dr. J. R. Neal explained the legislative problems and asked for their co-operation.

Sangamon County:

Licensed physicians in County (as per directory)..127
Number members in County Society.....103

This Society has regular monthly meetings, with interesting scientific programs and good attendance. The Society has had a splendid spirit of co-operation in meeting its lay education work. Last fall at the State Fair four thousand adult health examinations were made, and assistance was given the State in the Baby Conference.

During the meeting of the Illinois State Dental Society at Springfield, members of the Sangamon County Medical Society devoted a half day to the examination of the members of the dental profession as part of the work of the lay education program of the Dental Society. Much time and effort was given in the preparation of this work by the officers of the Sangamon County Medical Society and their committee.

Tazewell County:

Licensed physicians in County (as per directory).. 41
Number members in County Society..... 23

Tazewell County Medical Society was visited by your Councilor, accompanied by Dr. J. R. Neal, on May 11. A dinner was served with small attendance. On account of the close proximity of this Society to Peoria, the attendance has not been good. Lay education work in the community and organization was discussed, with a very timely talk by Dr. Neal.

With the interest manifested by the President and Secretary, this Society, with more co-operative effort from each of its members, should be able to have more frequent meetings with good scientific programs, and success in carrying out the welfare work of the community.

S. E. MUNSON, *Councilor,*
Fifth District, Illinois State
Medical Society.

6. Dr. H. P. Beirne, Quincy:

(No report was received from the Sixth District.)

7. Dr. I. H. Neece, Decatur, reported for the Seventh District as follows:

As the Chairman of the Council has said, I am fill-

ing the unexpired term of the late Dr. M. P. Parrish, and am the junior member of the Council. The twelve counties which make up the Seventh District are in good condition. There have been but two counties in the District that have not had regular meetings. We are doing our best to bring them around where they will meet regularly. I hope next year we can furnish a better report on the counties which have not fallen in line with the work of the State Society.

8. Dr. G. B. Dudley, Charleston, reported for the Eighth District as follows:

The Eighth District contains eleven counties with eight component societies. Every society is functioning. Membership ranges from 12 to 100 and the meetings vary from four to twelve per year. One society is having a definite program for the whole year and following a definite course of study. The membership remains about the same. There has been little gain and no apparent loss. So far as the raise in dues is concerned, I have heard very little criticism and no destructive criticism. I think the district on the whole is in very good condition.

9. Dr. Andy Hall, Mt. Vernon, reported for the Ninth District as follows:

The Ninth District is composed of 23 counties in the southern end of the state. I have not visited all the counties but I visited ten, including Herrin in bloody Williamson County. I have kept in communication with the secretaries of the other counties. There are two counties in the District that have no society. One county has only four active physicians and the other has only six. Most of the counties are functioning fairly well. Some of them have almost all the physicians who are in active practice and eligible as members. In Perry County Dr. Templeton reports 19 active physicians and 19 members in good standing. In my county, Jefferson, we have 25 members. We have had 11 meetings with an average attendance of 35.

In the Ninth District from east to west it is 150 miles and it is 150 miles from the north edge to the south, so it is not practical or possible for a man to visit all the counties in that District. For that reason I have recommended to the Council that the District be divided into two Districts, making an additional Tenth District. This new District will include St. Clair, Randolph, Union and Pulaski Counties.

(It was moved that the reports of the Councilors be accepted. Motion seconded and carried.)

The President: The next order of business will be the report of the Editor of the JOURNAL, Dr. Charles J. Whalen, Chicago.

REPORT OF THE EDITOR

With pleasure the editor reports that the ILLINOIS MEDICAL JOURNAL completes at this annual meeting the most prosperous and successful year of its existence.

An increase of approximately three hundred per cent. in the revenue and general activities of the JOURNAL has been achieved within the last few years.

Great as has been the effort to attain this end the results more than justify the labors of those who have made possible this triumph. Today the sphere of the ILLINOIS MEDICAL JOURNAL is world-wide.

Additional responsibilities and a larger operative cost have come with this enlargement of the scope and power of the periodical.

A point of satisfaction to the editor and of gratification to members of the Illinois State Medical Society is knowledge that the policies and issues fought for so energetically and for so long a time by the editor have been adopted by practically all of our great statesmen and by every medical organization throughout the United States.

A point of anxiety at present is fear a lack of public appreciation of the ever present danger may lead the optimists among us to feel that the fight is won. The struggle is only in the beginning. The one weapon upon which we may rely to win the fight is organization on the part of the profession to the ultimate degree. This assembling of a unit with which to make ballot-box protest against the lay dictation of the practice of medicine will result in immediate relief to the profession and to the public welfare—both financial and ethical. Taxes will be lightened and hampering legislation removed.

Over-centralized government, against which this magazine has fought for years, is now recognized as the wolf at the door by our keenest statesmen. Other objects of protest on the part of this magazine and its editor have been and are the principles involved in the dangerous Sheppard-Towner and similar legislation, the State Medicine menace, lay dictation of medical practice, the practice of medicine by lay corporations, a double standard for medical licensure. And each and every one of these items is recognized now as a burning question and pivotal issue by the thinking men of the country.

More than a decade ago insidious danger of menacing propaganda threatening the practice of medicine was recognized by your editor and denounced vigorously in the columns of the JOURNAL.

National demand for information on economic subjects treated editorially in the JOURNAL is resulting in constant demands for reprints of these articles. Within the last few years this demand has shown a rapid rate of increase—in fact one difficult to believe, almost.

Men and women of affairs realize as never before how the health welfare of the people affects the prosperity of a nation and its world outlook.

Because of this new clarity of vision the public sees that medical economics is fundamentally one with general economics.

Many of our present troubles have sprung, as the editor views it, from a great lack of that wider vision that sees medicine in its general relation.

Coupled with the lack even of desire for that vision problems of medicine have not risen in the public mind as the clearing house for science and service and civics.

Despite improvement in the economic eye of the pro-

fession and of the general public, the point of refraction is still askew. The danger line is not yet passed. The profession must realize that the scepter of dominion in the field of medicine will be wrested away unless a more vigorous attitude is taken in regard to the solving of current medical problems. These issues that may seem on the surface to be the private concern of the state or of the individual are in reality the first concern of the physician as only too fortunately many of us have discovered.

One of these problems that must be "met and fought with outright" is the health welfare masquerade. Lay organizations and "47 varieties" of near doctors are attempting to perform a large portion of health work that has been neglected by physicians.

Those who analyze danger spots in present-day trend of medical affairs know that the aggregate of gullible folk who promote and support practices threatening to drain the sap from the economic life of medicine is bound to bring about the worst form of medical service.

A dangerous trend is vesting of undue power with dispensers of charitable foundations and the distributors of educational funds. With the increase of organized charity there has followed an enormous increase in the pauper class. The mendacious who depend upon charity for the whole or a part of their needs find the present system of easy benevolence fruit ripe for their picking. Free clinics and other gratuities relating to sickness, added to ubiquitous health service curtails to a tremendous degree the usefulness of the so-called "family physician" and makes a new aristocracy of pauper invalids. In addition to creating a race of paupers this lowers the stamina and morale of a large class of people who should be self supporting and is a far cry from the early ideals of the colonists that have made of the United States the longest-lived of the world's numerous democracies. With this engrafting of foreign notions and pollution of socialistic ideas, how long can the nation and the democracy stand the strain?

School, district and industrial nurses yearly assume fresh responsibilities as to illnesses and their nature and guide cases into selected channels, sometimes with wisdom, but even so, these nurses act as a discretionary guard over the physicians of their communities—sad examples of the dogs being wagged by their tails.

Every day experience brings interference by nurses with orders from physicians; with the practice of medicine and surgery and with the abuse of charity in the medical world.

The editor believes in the ultimate victory of right. But to secure this victory there are certain inescapable tasks which each and every individual physician must set himself to do.

The solemn and serious duty resting heavily upon us is unappreciated by many members of the profession. The one and only antidote for the thousands of deceptive "uplift" schemes that degrade the science of medicine and destroy the public welfare is better work on the part of the profession and an ability to act cohesively when the time demands.

Indifference to the necessity of the motto "one for all and all for one" is one of the greatest current curses of the medical profession. Persecution threatens us. Men with their ears to the ground realize that never in the history of civilization has there been such a flowery path for imposters. So great have been the marvels of physical science brought to every home within the past five years from the perfection of the telephone, the airship, the victrolas and the radios that the great uncultured mass has come to look upon every man as his own miracle maker and to believe all the fairy tales of the quacks as never before. Medicine is too apathetic a science when it comes to blowing its own horn. The public imagination is aroused now as never before and advertising and self laudation have hypnotized the bulk of the population. Medicine must rise to defend the people against the advantages taken by the quack from this hysteria.

Organization is another keynote of the day. There are organizations of everything that gets anywhere. "Fighting fire with fire," to obtain any protection, the doctors must perfect an organization. In fact organization has become the first step in self-preservation. On every side arise organizations having as their sole motive the idea of lay persons to take over the practice of medicine, or to allow the opening of the "side door" so that incompetent persons can gain admission to the ranks of the profession.

Doctors must realize that powerful influences are working to attempt to deprive physicians of liberty of person and of conscience by restrictions, regulations, ukases and pronunciamientos of the self constituted regulators of mankind. Medical service by the laity is bound to fall short in the execution of its plan because it can not deliver sympathetic medical service.

Physicians must guard the public against official recognition of any body of untrained healers. Disagreeable though the task of going annually before the legislature may be, yet doctors must do this until there is required a uniform educational standard for all who wish to treat the sick.

Cooperation and organization is the only sure way to combat what has become one of the banes of professional life—the number of damage suits brought against physicians and that are on the increase. This too is the result of charlatanism.

Just now the public, eager for truth pertaining to hygiene and public health, should be given this truth by the profession and not the trash now in circulation. Newspapers, magazines, free public lectures and radio will help in this dissemination.

This is one of the tasks confronting physicians, as well as destruction of other evils, carried over from last year and from previous years.

After much education the profession realizes the existence of these evils. Let it be repeated that those that are not cured and that demand immediate and persistent attention include:

- (a) Increasing disposition to paternalism:
 1. Federal interference.
 2. State interference.

3. County or township interference.
4. Municipal interference.
- (b) Increasing tendency to bureaucracy.
 1. Installation of Portfolio of Medical Supervision
 2. Standardization of profession.
 3. Destruction of individualism.
- (c) Over-specialization of profession:
 1. Increased cost of medical service.
 2. Abolition of "family doctor."
- (d) Centralization at political headquarters of medical control.
 1. Washington, D. C.
 2. Various state capitols.
 3. County seats, etc.
- (e) Medical legislation fiat in practice of medicines:
 1. Harrison law.
 2. Volstead act.
 3. Smith-Towner bill.
 4. Sheppard Maternity bill.
 5. Venereal disease control legislation.
- (f) Unqualified admissions to license to practice:
 1. Christian Science.
 2. Chiropractic, osteopaths, etc.
 3. Over-trained nurses.
- (g) Attempted financial segregation:
 1. Tendency of moneyed foundations to despotism in professional mandates.
 2. Tendency to make use of free clinics and sociological measures as a playground for wealthy faddists at expense of poor and diseased citizenry.
- (h) False premonitions as to self-preservation, i.e., primitive desire to get without giving—"Something for nothing."

(It was moved that the report be received. Motion seconded and carried.)

The President: The next order of business will be the report of the Standing Committees.

REPORT OF PUBLIC POLICY COMMITTEE

Dr. Emmet Keating, Chicago, Chairman, reported as follows:

There are so many needs for contact between organized medicine and the public that the Public Policy Committee feels it to be its duty to be continually on the job, individually and collectively. Duties of this kind require alertness in recognizing opportunities, discretion as to how they should be improved, diplomacy and tact.

One activity of the past year of the Public Policy Committee, along with many other members of the State Society, has been the filling of speaking engagements assigned by the Lay Education Committee. These talks were made to clubs and organizations of various kinds and to the general public by means of the radio.

Last fall the Public Policy Committee secured from the Chicago Association of Commerce an invitation to Dr. Ray Lyman Wilbur, Ex-President of the Amer-

ican Medical Association and President of Leland Stanford University, to give the address at one of the weekly noonday meetings. Dr. Wilbur gave his talk on the subject of "Health—A Business Asset," Wednesday, February 17, to a large audience and as all talks at these meetings are broadcasted, Dr. Wilbur's message of that day was heard throughout the land. Notice of the meeting was carried in several issues of the Chicago Medical Society *Bulletin* and we are glad to report that a great many physicians and their wives were in attendance.

The Committee again wishes to call the attention of the House of Delegates to the recommendation made last year that an endowment fund be raised to supply funds for the needs of the Lay Education Committee, whose work has proved of so much value, both to the public and to the profession. This work of the Illinois State Medical Society is being observed and discussed with great interest by state medical organizations throughout the United States.

The task is just beginning. As time goes on it will increase in scope and magnitude. New demands will arise for the committee's activities and greater financial support will be required. It is neither fair nor right that the members of the medical profession should carry this burden alone. The beneficiary is and will be the public. Its financial support will be necessary to the carrying out of future projects and will have the added benefit of stimulating public interest in the work that is and will be done by the Lay Education Committee.

There are two ways by which an endowment fund can be established. One is by cash donations; the other, bequests in wills. In each case the medical profession should share with the public in this laudable undertaking.

A not inconsiderable fund could be raised by periodical reminders in the *ILLINOIS MEDICAL JOURNAL* and the weekly or month publications of county medical societies. The *ILLINOIS MEDICAL JOURNAL* and the county publications could carry, either permanently or periodically, blank forms—one for those wishing to make cash donations or donations of securities, and the other for those who wish to make provision in their wills.

Much can be accomplished if individual physicians will present this matter to those of their patients who are always ready and willing to contribute to agencies of public welfare. Such requests are doubly easy because the physician is asking nothing for himself.

As a concrete example—two months ago a lay individual executed and deposited in the trust department of one of the large loop banks of Chicago a will, making the Trust Company administrator of a fund approximating thirty thousand dollars, the income from which will be paid in perpetuity to the Illinois State Medical Society, to be used by the Lay Education Committee for the education of the public in matters of health.

The second proposition which should engage the attention of the Society and upon which definite ac-

tion should be taken is a corollary of the first. From the insurance companies, from the large industrial concerns, from capable medical writers in current magazines and the daily papers, by means of the radio, and addresses to business organizations and women's clubs, has come a campaign for preventive medicine and periodic health examinations.

One of the most pressing needs of the coming year is the awakening of those general practitioners who have not as yet opened their eyes to the dawn of preventive medicine in the field of periodic health examinations. The public is in process of being successfully educated to seeing the value of this procedure for the assurance of better physical and mental health and the prolongation of useful lives.

There is abundant evidence that some general practitioners are reluctant to adjust themselves to the new type of practice which such examinations will require. They are restrained by the centuries old tradition that "They who are whole need not a physician": by the fear that the public will refuse to pay for the time and knowledge expended; by the failure to realize that the public will quickly appreciate that work of this kind cannot and will not be done for trifling fees. The physician's school training was and is the study of well developed pathology. So long as the terminal stages of disease only are observed in studies and teaching, efforts directed towards prevention are minimized.

Periodic health examinations must for the most part be made by the family physicians. The specialist cannot do this work. He can only help the general practitioner in those instances where his training and greater experience in limited fields of work make him especially proficient. The professors of internal medicine are too few in number to meet the coming demand of the general public. It will fall upon the family physician to make complete examinations, to correct departures from the normal that do not require the skill of special training and to give the counsel and advice that the specialist cannot give.

With the control of the great epidemics has come the opportunity for medical men to concentrate their attention upon the study of a thousand and one things that are not sudden in disabling, but are the remote cause of permanent ill health and untimely death. One of the greatest benefits to the profession, of periodic health examinations, will be the necessity for post graduate study. Samuel Johnson said, "Men need not only to be informed, but often reminded of the most common things."

One of the most valuable post graduate courses is the one that can be carried out by small groups of local physicians. Weekly or monthly two hour meetings which are attended by the same faithful few must be supplemented by half day sessions that every practicing physician in the community will find it necessary to attend.

The faithful service of the family physician of the past, in treating acute diseases will be replaced by just as faithful service of the family physician of the

present and future in careful study of the physical and mental condition of the apparently well. Instead of a laborious house practice, the most of our patients will come to our office and will come by appointment.

It has taken many many years for preventive medicine to reach its present state of development. Preventive medicine in the way of sanitation and health department activities has made greater progress than preventive medicine for the individual. One of the reasons is that health departments work for salaries and devote their energies to certain specified activities.

Health departments develop programs and then proceed to carry them out in as complete a manner as public sentiment and the cooperation of the medical profession will permit. It is not so essential that the lay and professional workers in health department organizations believe in the program which they may be carrying on. They work for a boss and do what they are told. The physician in private practice can neither be bossed nor led. He does many things in an experimental way before he has been convinced of the certainty of results, but he will not persist in any course of action unless he is convinced that he is dealing with settled facts.

Whatever can be done by the State Society to arouse and sustain the interest of the individual physician to take even more active measures than he is already doing, in the prevention of diphtheria, cancer and heart disease should be done. Most physicians believe that toxin-antitoxin will prevent diphtheria. There are some who do not; there are a multitude who are indifferent to urging its use. All physicians are not aware of the menace to the heart of diseased tonsils and infected gums. If progress is to be speeded the State Society must have a program.

The education of the public in matters of health is a protection far superior to legislative enactments. This education can properly be given only by physicians. There are many people who do not know this. If we will continue to educate the people in the principles of health that can be made clear to their understanding, those principles will have little need of defense or guardianship.

We would respectfully recommend that the State Society take definite action which will insure, first: the establishment of a uniform system which will serve as a basis that family physicians may follow, modify or improve, to make these examinations and preserve their records for future generations or physicians and patients; second: the organization and supervision of small groups of physicians in each community which shall meet at least one-half day of each month.

EMMET KEATING, Chairman
WARREN JOHNSON,
JOHN F. SLOAN,

Committee.

(It was moved that the report be accepted.
Motion seconded and carried.)

REPORT OF THE LAY EDUCATION COMMITTEE

Miss B. C. Keller, Chicago, reported as follows:

Mr. President, Members of the Council and the House of Delegates: First, I shall report on the quantitative showing for the year's work in the Lay Education Committee—the ways and means in which conventional media were utilized to carry to the lay public and the profession alike the five fundamental policies of the campaign, which are as follows:

1. To make clear the meaning and necessity of the single standard of medical education.
2. To teach preventive medicine, toward which the periodical health examination is the single greatest step.
3. To hold back state medicine by stimulating in the component medical societies a responsibility for those public services of education and relief which, if neglected, tend to become official functions.
4. To effect a working cooperation with the allied professions having a mutual interest with the medical profession in the teaching of health.
5. To establish teamwork with the community to the end that all health movements may be conducted with guidance, counsel and direction of the organized medical profession.

Speaker's Bureau—Educational talks by representatives of the Bureau number 914 as compared to 484 in the year preceding. The average expense to the Society was \$2.86, indicating that many physicians not only donated their services, but paid their own traveling expenses. Talks were made in 79 of the 102 counties in the state.

Newspapers—News material has been issued to press syndicates and 352 individual publications following such Society activities as notable scientific meetings, special community demonstrations and the movement for a state sanity commission as launched some months ago by the State Council. The most effective use of the press, however, seems to be the "health columns" appearing in 57 downstate publications, weekly, bi-weekly or tri-weekly, each over the signature and with the censorship of the local county medical society with the exception of St. Clair County where the material appears without signature and Effingham County where it is used in the name of the Effingham County Public Health Association.

Moving Pictures—Supplementing the leading service of the State Department of Public Health, 131 moving picture films on health have been shown before lay audiences. Sources have been the Extension Department, University of Wisconsin—the University of Illinois has nothing to offer us—the Society for Visual Education, the American Dental Association and the Metropolitan Life Insurance Company.

Radio—Stations WGN, WMAQ, WLS, WQJ, WENR, and WBCN, all in Chicago, have extended us broadcasting courtesies which have made possible 92 radio talks during the past year, the average cost to the Society—largely clerical—being \$1.15.

Exhibits and Demonstrations—Varying from an elab-

orate demonstration of the periodical health examination held at the Drake Hotel in January in connection with the annual clinic week of the Chicago Dental Society to the simple poster exhibits loaned to rural schools, this Committee has organized and arranged 145 exhibits and demonstrations in health education during the past year at an average cost of \$24.60.

Pre-School Child Campaign—This effort to have the apparently healthy child thoroughly examined by the family doctor and dentist before it reaches school years is being handled in cooperation with the Illinois State Federation of Women's Clubs, the Illinois State Dental Society, and the State Department of Public Health. Activity has been manifested in 116 towns, 27,825 forms of examination have been issued at the request of federated club women and 982 personal letters have been written to individual physicians explaining the significance of the campaign and suggesting detail for handling it. Of the more than 2,000 examinations which have already been reported at the office of the Lay Education Committee, it is notable that only 475 were given in public conferences and these at the recommendation of the local medical organization.

Health Pageants—Community Health Pageants were held in connection with the Northwest Side Branch and the Physicians Fellowship Club and with the Englewood Branch of Chicago Medical Society. That on the Northwest side cost approximately \$5,000 and receipts totaled about \$9.00 over and above that sum; that in the Englewood district showed an expense of approximately \$5,750 and receipts of about \$11.00 less than that sum. This means a total of some 10,000 people were reached either through the demonstrated examinations, the health exhibits of the lecture and moving picture programs at a net cost to the society of \$2.00. We do not, however, recommend the Health Pageant as a method to be widely used, as its successful conduct means the neglect of other and equally vital state work.

School Examinations—Through the influence of this Committee together with able and effective cooperation from several councilors, 32 medical examinations of school children were conducted where such service was not regularly available.

Unorganized Women—In conjunction with other educational agencies, demonstrations were arranged during Health Week and immediately thereafter for unorganized women through the medium of ten large department stores in Chicago. This appeal seemed to reach large numbers of the women not in organizations and consequently, less inclined to over-stimulation and the diffusion of energy through a multiplicity of channels.

Scientific Speakers were furnished to 17 county medical societies and particularly successful symposiums were given in pediatrics, orthopedics, and the practice and technic of the periodical health examination.

Organizations—Service of some type was extended to a total of 73 organizations of varying degrees of activity in health education. Among the most sig-

nificant and those which apparently promise much for future activity were:

1. Illinois State Federation of Women's Clubs, Child Welfare Department—19 districts.
2. Illinois Council of Parent-Teacher Associations—14 units.
3. Illinois Home Bureau—7 county units.
4. Illinois State Dental Society—Committee on Mouth Hygiene and Public Instruction.
5. State Department of Public Health—Department of Child Hygiene.
6. Teachers' Institutes—23 counties.
7. Illinois State Association of Graduate Nurses—3 districts.

Of this general service 70 per cent. was rendered to lay organizations; 80 per cent. was utilized by 20 counties from the 102 in Illinois.

It should be borne in mind that the foregoing may mean much or little. Strictly speaking, it has about the same relationship of the actual working out of the problem of health education in the state of Illinois as would a record of the pounds of pills and quarts of tonic and gallons of stimulants dispensed last year by the collective members of the Illinois State Medical Society bear relationship to the cutting down of mortality rates. Any value in such service is contingent upon its appropriateness to the condition diagnosed.

From the record of successes and failures during the past two years, certain recommendations can legitimately be made for the greater appropriateness of further educational work to the needs of the people.

1. We must focus more intensively upon the child. Too much of the speaker's work, in particular, has been directed to adult audiences, less susceptible to a modification of customs and prejudices.

2. We must relate more closely the programs of lay education to the regulation business of the Society. Their cost to the Society is about \$2.00 per capita of the three-dollar raise in annual dues authorized at the 1925 state meeting. No matter what their influence upon the lay mind in general, they must be made an integral part of all county society work if they are ever to be justified in the mind of the individual physician.

3. We must make a direct effort to cut mortality rates. Nothing to the lay person will more quickly differentiate this movement from selfish propaganda and will more readily gain good will and cooperation for it. Those of you who have watched the development of Lay Education work know that this was the purpose of its sponsors from the beginning. We must make this purpose more obvious.

4. We must direct more attention to the unorganized groups.

5. We must equalize the amount of service now being rendered in the state in order that each county may receive its just proportion—whether the county society takes the trouble to ask for it or not.

It has been stated earlier in the course of this meet-

ing that the unorganized medical man is a menace. May I add that I have seen abundant evidence that the weak county medical society is a deficit to any community, and a strong medical organization its greatest contribution to economic soundness and good American citizenship. This committee must be made to build and serve and make friends for your organization as a whole. It must pave the way for your leadership.

REPORT OF THE MEDICO-LEGAL COMMITTEE

Dr. C. B. King, Chicago, chairman reported as follows:

To the House of Delegates, Illinois State Medical Society:

During the year that has just passed, we have had thirty-one new malpractice suits, twenty-three in Cook County and eight in the remainder of the State. During the same period of time, forty suits were disposed of, twenty-six in Cook County and fourteen in the balance of the State. During the same time, there were thirty-two new claims reported from Cook County and sixteen from downstate. On May 1, we have remaining eighty-six suits, which is the lowest figure we have had since 1921. On May 1 of the respective years, there were pending in 1923, one hundred and one suits; 1924, ninety-four suits; 1925, ninety-five suits; 1926, eighty-six suits.

The total number of suits filed this past year is encouragingly less than the average for the past six or eight years and the proportionate number filed outside of Cook County has decreased. The number of claims reported during the past year has been about the average.

We have been getting the usual number of suits originating in burns and have several troublesome suits, and one claim which will result in suit, that arises out of claim of retained instruments.

The Committee has found that most members of the Society respond very readily when their assistance is requested but we have found some members who do not appear to realize the duty that is owing.

A large number of the members of the Society seem to be carrying malpractice insurance and the Committee unanimously endorses that idea. While this increasing proportion that carries insurance may add somewhat to our difficulties in the cases where there is no insurance, it materially reduces the worry of the doctor who has a claim against him to know he is not likely to pay any judgment because he has the insurance policy behind him.

Of the cases disposed of during the past year, none was lost, but settlements were made in some of them, but these were comparatively small amounts that were paid. The only case in which we met with a reverse was one in which the Court had directed a verdict for the defendant. The plaintiff took the case to the Appellate Court and the Appellate Court reversed the case and sent it back for a new trial on the ground

that the Court should have allowed the jury to pass upon it. This new trial has not yet been held.

Respectfully submitted,

MEDICO-LEGAL COMMITTEE,

By C. B. KING, Chairman.

REPORT OF THE LEGISLATIVE COMMITTEE

Dr. J. R. Neal, Springfield, reported as follows:

In the last General Assembly thirty-six bills designed to alter the Medical Practice Act were presented and by the active opposition of physicians throughout the State of Illinois the entire number were decisively defeated.

The hardest fought battle was that of the chiropractors who were exceptionally well organized and maintained a very large lobby at Springfield during the entire session. The chiropractors were very earnest in their work and had methodically canvassed every portion of the state. Most of their efforts were confined to the home districts of the Legislature and a careful analysis of the vote conclusively showed that in the districts where the physicians were indifferent regarding the measure the chiropractors gained their greatest number of votes. They fell twenty short of the constitutional majority in the House and although decisively defeated it is not a particularly creditable thing to the Illinois State Medical Society that fifty-seven law makers in the House of Representatives so voted to support a measure of this sort.

Among the outstanding cult bills that were presented, in addition to the chiropractic bill above referred to, was another bill creating a Chiropractic Board; two to regulate naprapathy; one for a Board of Natureopaths; one creating an Osteopathic Board; one permitting osteopaths to do obstetrics; one permitting osteopaths to do surgery; one exempting osteopaths from the Optometry Act and classing them with the regular practitioner; and one osteopathic measure removing all limitations regarding drugless healers. Two Masseur Bills were also introduced.

Through the alleged and incorrect charges against the Chicago Health Department the League for Medical Freedom succeeded in getting a bill passed by both the House and Senate, which was designed to prevent health authorities from entering the home of a person suffering with a contagious disease without first getting a court order. The bill was so loosely drawn and obviously so dangerous in its functions, if it became a law, that your Committee did not believe that it was possible, even though the bill was passed by the House and Senate, for the Governor to allow such an unfortunate situation to become a law. While the bill was entirely one that concerned the administration of the Health Department, nevertheless one of the members of your Legislative Committee appeared with the Director of Public Health, and several others, before the Governor and after the matter was thoroughly explained to him he promptly vetoed the bill.

This was the only test during the entire session and demonstrated that the Governor has kept faith with

the Illinois State Medical Society and that he opposed all vicious laws regarding the public health and favored the recommendations of the Illinois State Medical Society.

No other matters affecting the Medical Profession were permitted to pass either the House or the Senate.

Your Committee is deeply grateful to the Council for its advice and help and to those county societies which maintained active legislative committees and especially to the Chicago Medical Society for the excellent legislative organization, which worked perfectly throughout the entire session. The Chicago councilors had a tremendous task in perfecting the organization and there were but very few Cook County legislators who were not seen by an active committee of physicians in their particular district. Without the aid of Cook County in the chiropractic fight the bill would, undoubtedly, have passed the House.

Especial praise is due your President, Dr. J. C. Kraftt, for his unselfish devotion to this important work in Chicago. Without his individual aid and advice on a number of occasions it would have been impossible for us to have attained the results that we did in the last General Assembly.

The Sheppard-Towner bill, known as the Federal Maternity Act is now pending in Congress and the proponents of the bill are asking an extension over the five-year period for which this bill was originally passed. The bill has passed the lower House and is now pending in committee in the Senate. Inasmuch as forty-three states accepted this Act it would rather follow that no great difficulty will be experienced in having it passed by the Senate. If the extension is granted and the President signs the bill the Illinois State Medical Society will necessarily have to oppose it in the next General Assembly. Illinois was one of the five states that refused this federal meddling in maternity matters.

A large amount of credit is due your Lay Educational Committee for its excellent work in preventing this measure from coming up in the 1925 session of the Legislature by maintaining an intimate contact with the Federation of Woman's Clubs in the State.

Your Committee is appreciative of the cooperation in practically every senatorial district which made it possible to conduct the entire program without asking a single physician to take his time and the necessary expense to come to Springfield during the session for lobbying purposes. All factions which we were forced to oppose maintained large and constant lobbies in Springfield.

Respectfully submitted,

C. E. HUMISTON,

E. H. BOWE,

J. R. NEAL.

(It was moved that these reports be accepted. Motion seconded and carried).

DR. J. W. VAN DERSLICE, Chicago: I move that the recommendations by the Councilors be referred to the Committee on By-Laws.

THE PRESIDENT: We have no standing committee on constitution and by-laws.

DR. J. W. VAN DERSLICE, Chicago: I move that we accept such recommendations from the Councilors as notices of a change in by-laws. (Motion seconded and carried).

DR. J. W. VAN DERSLICE, Chicago: I move that these changes be referred to the Committee on Resolutions to be reported on Thursday. (Motion seconded and carried).

NEW BUSINESS

THE PRESIDENT: I will appoint as the Committee on Resolutions, Drs. C. E. Humiston, Chicago, J. E. Tuite, Rockford and C. F. Newcomb, Champaign.

THE SECRETARY: I have two or three letters which can be referred to the Committee on Resolutions. (Reads letters).

I have also an invitation from the Murphy Memorial Association to the dedication of the Murphy Memorial on June 10 and 11.

DR. J. W. VAN DERSLICE, Chicago: I move that the invitation be referred to the Council with power to act. (Motion seconded and carried).

On motion duly made and seconded the House adjourned at 11:40 P.M. to meet again on Thursday morning.

SECOND SESSION

Thursday Morning, May 20, 1926

The Thursday morning session was called to order at 8:25 a.m. by the President. The Secretary called the roll and announced that a quorum was present.

THE PRESIDENT: We will have the report of the Credentials Committee.

DR. J. S. NAGEL, Chicago: There are 112 delegates present, 70 from down state and 42 from Cook County.

THE PRESIDENT: The next order of business will be the reading of the minutes of the previous meeting.

DR. J. S. NAGEL, Chicago: I move that the reading of the minutes be dispensed with. (Motion seconded and carried).

THE PRESIDENT: The next order of business will be the election of officers. I will call for nominations for President-Elect.

DR. J. S. Nagel, Chicago, presented the name of Dr. G. Henry Mundt, Chicago, for President-Elect. Dr. W. H. Gilmore, Mt. Vernon, moved

that the nominations be closed and that the Secretary be instructed to cast the ballot of the House of Delegates for Dr. Mundt as President-Elect. Motion seconded and carried. The President declared Dr. Mundt. elected.

DR. C. F. Newcomb nominated Dr. Earl D. Wise, Champaign for First Vice President. Dr. Emmet Keating, Chicago, moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Wise as First Vice President. Motion seconded and carried. The President declared Dr. Wise elected.

DR. S. M. Munson, Springfield, nominated Dr. C. S. Nelson, Springfield, for Second Vice-President. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Nelson for Second Vice-President. Motion seconded and carried. The President declared Dr. Nelson elected.

DR. A. J. Markley, Belvidere, was nominated for Treasurer. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Mr. Markley for Treasurer. Motion seconded and carried. The President declared Dr. Markley elected.

DR. W. D. Chapman, Silvis, nominated Dr. H. M. Camp for Secretary. It was moved that the nominations be closed and the President instructed to cast the ballot for Dr. Camp as Secretary. Motion seconded and carried. The President declared Dr. Camp elected.

For Councilor of the First District, Dr. J. R. Neal, nominated Dr. D. B. Penniman, Rockford, to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Penniman for Councilor of the First District. Motion seconded and carried. The President declared Dr. Penniman elected.

For Councilor of the Second District, Dr. E. E. Perisho, Streator, was nominated to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Perisho for Councilor for the Second District. Motion was seconded and carried. The President declared Dr. Perisho elected.

For Councilor of the Third District, Dr. S. J. McNeill, Chicago, was nominated to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. McNeill for Councilor of the Third Dis-

trict. Motion seconded and carried. The President declared Dr. McNeill elected.

For Councilor of the Eighth District Dr. Cleaves Bennett, Champaign, was nominated. It was moved that the nominations be closed and the Secretary be instructed to cast the ballot for Dr. Bennett for Councilor of the Eighth District. Motion seconded and carried. The President declared Dr. Bennett elected.

For Councilor of the Ninth District, Dr. I. H. Neece, Decatur, was nominated. It was moved that the nomination be closed and the Secretary instructed to cast the ballot for Dr. Neece for Councilor of the Ninth District. Motion seconded and carried. The President declared Dr. Neece elected.

For Delegates to the American Medical Association the following were nominated: Drs. E. P. Sloan, Bloomington, T. O. Freeman, Mattoon, R. L. Green, Peoria, C. J. Whalen, Chicago, W. A. Pusey, Chicago and J. S. Nagel, Chicago.

Dr. W. H. Gilmore, Mt. Vernon, moved that the nominations be closed and the Secretary instructed to cast the ballot for the six delegates named. Motion seconded and carried. The President declared them elected.

For alternates the following were named: Drs. G. C. Brown, St. Marie, G. C. Otrich, Belleville, Alden Alguire, Belleville, S. J. McNeill, Chicago, Emmet Keating, Chicago and N. S. Davis, Chicago.

It was moved that the nominations be closed and the Secretary instructed to cast the ballot for the six alternates named. The President declared them elected.

As members of the Committee on Public Policy, Drs. Emmet Keating, Chicago, Warren Johnson, Chicago and John F. Sloan, Peoria, were nominated and duly elected.

For the Committee on Medical Legislation, Drs. John R. Neal, Springfield, C. E. Humiston, Chicago, and Edward Bowe, Jacksonville, were nominated and duly elected.

For the Medico-Legal Committee two members were nominated, Drs. C. A. Hercules, Chicago, and George Weber, Peoria, were nominated and duly elected.

As the Committee on Relations to Public Health Administration Drs. Frank R. Morton, Chicago, Frank Maple, Chicago, E. D. Levisohn, Chicago, J. E. Tuite, Rockford, and E. P. Cole-

man, Canton, were nominated and duly elected.

The President asked the Second Vice-President, Dr. J. J. Pflock, to take the chair and preside during the remainder of the session.

The next order of business was the report of the Committee on Resolutions by the Chairman, Dr. J. E. Tuite, Rockford. The following resolutions were presented and acted upon in turn:

1. *Postmortems in Public Institutions*

WHEREAS, It is the conviction of the Eye and Ear Section of the Illinois State Medical Society that the knowledge derived from post-mortems is essential to the progress of medical science and to the welfare of the citizens of this state, and

WHEREAS, It is becoming more difficult to secure postmortems in public institutions, therefore, it be

Resolved, That a committee of three be appointed by the Illinois State Medical Society to investigate the holding of postmortems in public charitable institutions, especially with reference to their relation to research and teaching in medicine, and that this Committee report to the Council of the Illinois State Medical Society.

This resolution was presented by Dr. George W. Boot, Chicago, at the Eye, Ear, Nose and Throat Section of the Illinois State Medical Society.

It was moved that the resolution be adopted. Motion seconded and carried.

2. *Endowment Fund for Work of Lay Education Committee*

The Public Policy Committee of the Illinois State Medical Society recommends to the House of Delegates that an endowment fund be established for the purpose of carrying on the work of the Lay Education Committee.

It was moved that the resolution be adopted. Motion seconded and carried.

3. *Formation of a Radiological Section*

WHEREAS, The Central Illinois Radiological Society and the Chicago Roentgen Society, the only Radiological Societies of Illinois, have unanimously resolved to favor the creation of a Section of Radiology in the Illinois State Medical Society, and

WHEREAS, The membership of these two Societies being composed of members of the Illinois State Medical Society, who, if a Section of Radiology is created, would, in a large measure, attend the annual meetings of our State Society, and

WHEREAS, The formation of a Section of Radiology in our State Society will tend to elevate the radiological profession in Illinois and keep it in the hands of qualified physicians, and

WHEREAS, A Section of Radiology was applied for last year at which time the House of Delegates referred it to the Council for further investigation, and

WHEREAS, The Council appointed a special committee to investigate the need and desirability of such a Section and that the majority of members of this committee have already expressed themselves as favorable to the creation of such a Section, and believe the interests of the Society will be best served by the formation of such a Section, and that the report, therefore, of this committee will be a favorable one, and

WHEREAS, The creation of a Section of Radiology in our State Society has already met the approval of every member of the present Scientific Committee of the State Society, and of a large number of the former presidents of the Society, and

WHEREAS, Resolutions endorsing the proposed section of Radiology have been passed by a large number of county medical societies of the State, including the Council of the Chicago Medical Society, and

WHEREAS, The State Society of Wisconsin, Massachusetts, Louisiana and Texas have already formed Sections of Radiology in their Societies in addition to the American Medical Association, therefore

We, the respective officers of the Central Illinois Radiological Society and Chicago Roentgen Society, respectfully urge that you establish a Section of Radiology in the Illinois State Medical Society and thus place Illinois with the leaders in this progressive movement.

FOR THE CENTRAL ILLINOIS RADIOLOGICAL SOCIETY

(Signed) HAROLD SWANBERG, Quincy,
President;
WALTER BAIN, Springfield,
Vice-President;
H. C. KARIHER, Champaign,
Secretary-Treasurer.

FOR THE CHICAGO ROENTGEN SOCIETY

(Signed) E. L. JENKINSON, President,
I. S. TROSTLER, Vice-President,
E. S. BLAINE, Secretary-Treasurer.

The Section of Radiology for the Illinois State Medical Society has been endorsed by the following:

1. Central Illinois Radiological Society.
2. Chicago Roentgen Society.
3. Committee appointed by the Council to investigate the matter, consisting of Drs. J. C. Krafft, Chicago, Chairman; H. H. Camp, Monmouth, and R. R. Ferguson, Chicago.
4. The following County Medical Societies: Adams, Chicago Medical Society, Crawford, Jackson, Jersey, Kankakee, Knox, Macon, McDonough, McLean, Peoria, Pike, Sangamon, Union, Vermillion, Will-Grundy, Winnebago, Woodford and Edgar.
5. Every member of the present Scientific Committee of Illinois State Medical Society, as follows: J. C. Krafft, President; H. M. Camp, Secretary; Section on Medicine, B. V. McClanahan, Galesburg, Chairman, and Leroy H. Sloan, Chicago, Secretary; Section on Surgery, P. H. Kreuscher, Chicago, Chairman, and E. P. Coleman, Canton, Secretary; Section on Eye,

Ear, Nose and Throat, C. M. Robertson, Chicago, Chairman, and Louis Ostrom, Rock Island, Secretary; Section on Public Health and Hygiene, C. H. Diehl, Effingham, Chairman, and H. V. Gould, Chicago, Secretary.

6. The following past Presidents of the Illinois State Medical Society: A. L. Brittin, Athens; E. B. Cooley, Danville; E. W. Fiegenbaum, Edwardsville; M. L. Harris, Chicago; H. C. Mitchell, Carbondale; L. H. A. Nickerson, Quincy; E. H. Ochsner, Chicago; E. P. Sloan, Bloomington, and C. J. Whalen, Chicago.

Dr. Tuite moved the adoption of the resolution.

DR. J. W. VAN DERSLICE, Chicago: I think we ought to take into consideration that we should not encourage the adoption of new sections. The policy of the American Medical Association is against multiplicity. We had in this town on Tuesday five sections running concurrently. There are very few of the small cities that can take care of six sections within any radius that will be accessible to the members. An additional section means additional expense for the renting of a hall. I disapprove very heartily of the resolution. There are more industrial surgeons in this state by far than radiologists. The industrial surgeons have their meetings entirely separate from that of the State Society and we are under no obligations to pay their expenses and they get along nicely with their meetings. So far as I know the number of radiologists is only about 1 per cent. of the whole membership. There is hardly a specialty that would not show a greater percentage of members than radiology. I am opposed to increasing the number of sections unless there is a very definite reason.

DR. W. D. CHAPMAN, Silvis: A similar resolution appeared before the Council. The Council came upon a section of our by-laws, reading as follows:

Chapter IV, Section 1.—For the transaction of scientific business, there shall be one or more Sections, as may be determined from year to year by the committee on scientific work.

Chapter IX, Section 2.—The Committee on Scientific Work shall consist of the chairman and secretaries of the respective Sections and the President and Secretary of this Society. It shall arrange the scientific program for each session, subject to instruction by the House of Delegates.

I move as a substitute motion that the resolution be referred to the Scientific Committee.

DR. J. W. VAN DERSLICE, Chicago: Granting

all that Dr. Chapman said, I do not think we should sidestep. We want other sections or we do not. There is a majority of this House coming back here from year to year. It may be that the Scientific Committee made up as it is this year without any recommendation from this House would endorse the Radiological Section and the Committee next year might not want such a section. The Committee on Scientific Work changes every year. This House should decide the question.

DR. EMMET KEATING, Chicago: I am sorry to take issue with Dr. Van Derslice. The subject of radiology is becoming a highly technical one. If any of you have taken the time to attend a meeting of radiologists you know that what they talk about is Greek to you. What does that mean? If we are going to have progress in radiology, we must give these men an opportunity to get together.

DR. J. S. NAGEL, Chicago: I would like to see this question settled by the House of Delegates. If we do refer this to the Scientific Committee it does not mean that we can have the Section because it is up to the Council to approve of it. I am opposed to creating another section because we turned down the petition of the industrial surgeons. If we pass on this as a new section, there is no reason why all the specialists will not want to create new sections. There is no reason why the radiologists should not come on the general program.

DR. W. H. GILMORE, Benton: I think the question of an additional section is up to this body. For quite a few years I have done nothing but X-ray work. I am opposed to this new section not as an X-ray man because for me it would be a wonderful thing. I am convinced that we should have only two sections. I think the Eye, Ear, Nose and Throat Section should have a part in these two programs. If we have a Section on Radiology what will happen? The only ones who will go will be those who are particularly interested. The men in general surgery or medicine will not go. It would be much better if the Scientific Committee would give the radiologists two or three papers in the General Session and let us carry our message to you. If we have a separate section it will develop into technicalities.

DR. J. C. KRAFT, Chicago: I happen to be a member of the Committee appointed to look into

this matter. We had considerable correspondence. Letters from nineteen or twenty counties were received and also many from individuals. Many state societies have such a section. The American Medical Association has seen fit to put in such a section. If we want to encourage these men we must have a section for them. The other sections are of no interest to the radiologist. When you talk about a little expense, what is the difference? Fifty, seventy-five or one hundred dollars to a Society of 7,000 does not mean much. I am for the resolution.

DR. E. P. SLOAN, Bloomington: I would hate to see the x-ray men get a large section of our Society. There are only a few people to listen to x-ray papers. If you put them on the general program the men not interested do not stay and the essayist is embarrassed. In one of the western states they have a section on radiology which includes diathermy and all light treatment. They put them on the last day of the meeting and they had the largest attendance this year they ever had. If you put them on the general program the other men refuse to stay. Reference was made to the industrial surgeons. The industrial surgeon is not a specialist. Every general practitioner thinks he is an industrial surgeon. I am free to admit that these men should have an opportunity to discuss their own problems.

DR. W. D. CHAPMAN, Silvis: With the consent of my second, I would like withdrawn the substitute motion. It seems that the members of the House feel that they have the authority to take action at this time.

THE VICE PRESIDENT: There was no second. We shall now vote on the original motion to accept the resolution. The vote on the motion showed 44 in favor and 40 against. Motion carried in favor of adopting a Section on Radiology.

4. *Harrison Narcotic Act*

WHEREAS, There has been introduced into the Sixty-ninth Congress a bill to strengthen the Harrison Narcotic Act of 1914 and,

WHEREAS, The declared purpose of said bill, known as S. 4085 is "to clear up certain points which have been raised in certain courts to the disadvantage of the government," and

WHEREAS, This bill is a flagrant invasion of the rights of the states to regulate the practice of medicine, therefore, be it

Resolved, That the Illinois State Medical Society voice its disapproval of S. 4085, and, be it further

Resolved, That the senators and representatives from Illinois be requested to oppose its passage.

It was moved that the resolution be adopted. Motion seconded and carried.

5. *Resolution Opposing Sheppard-Towner Bill*

The Resolutions Committee offers the following motion: It is moved that the Legislative Committee of this Society be instructed to advise the United States Senators and Representatives from Illinois protesting the extension of the Sheppard-Towner law now before Congress.

It was moved that the resolution be adopted. Motion seconded and carried.

6. *Formation of a New Councilor District*

WHEREAS, The Ninth Councilor District covers so much territory that it is impossible to serve the several component societies, therefore, be it

Resolved, That the by-laws of this Society be so amended to create a Tenth District and to include in it the following counties: St. Clair, Washington, Monroe, Randolph, Perry, Jackson, Union, Alexander, and Pulaski.

It was moved that the resolution be adopted. Motion seconded and carried.

7. *Insurance Examiners*

WHEREAS, It is our belief that it would be to the advantage of all reputable physicians to belong to component medical societies, and

WHEREAS, The human mortality rate has been materially lowered by efforts of ethical physicians belonging to and cooperating with medical societies, and

WHEREAS, All life insurance companies are interested in a lowering of the mortality rate for material reasons and look for aid from reputable physicians, therefore, be it

Resolved, That the proper authorities of the American Medical Association confer with insurance companies with the view of their employing so far as possible for medical examiners members of the county, state and national medical societies.

(Signed)

Stephenson County Medical Society.

Your Committee feels that it has no authority and asks that the matter be referred to the Secretary.

8. *County Health Officer Bill*

The following letter was received by the Secretary from Isaac D. Rawlings, Director of Public Health, asking that the Illinois State Medical Society sponsor a bill for a medical county health officer:

"I wish to call to your attention that there are in Illinois over 2,600 health officers of whom 2,400 are lay health officers without medical supervision.

This Department has tried for several years to get enabling legislation which will permit the counties that so desire to employ a county health officer, this county health officer to have supervision over the lay health officers, the public health nurses, epidemic and communicable disease control.

The following resolution was passed by the Council of the Illinois State Society and published in the January, 1925, ILLINOIS MEDICAL JOURNAL:

1. The State Society is vitally interested in the public health of the State.

2. There is need of more efficient and adequate preventive health service in many communities.

3. The county rather than the township and village is the proper unit for health supervision under the direction of full-time medical health officers.

The Society believes in the greatest amount of decentralization of authority compatible with efficiency and that the position of health officers should be safeguarded from improper political interference.

County health officers should devote their entire time to the duties of their office and should not be permitted to engage in private practice of medicine.

Before a county system of health work can be inaugurated, enabling legislation is necessary.

More recently a resolution by the Council of the Illinois Medical Society declared in no uncertain terms for medical men instead of laymen for public health officers.

May I express the hope that the Illinois State Medical Society will undertake to secure legislation for public health service of type suggested by these resolutions at the next session of the legislature which will enable counties desiring this service to employ a medical health officer. This privilege is now granted to all cities which pass an ordinance and provide an appropriation. With the improvement in our roads and better transportation there is every reason why a county should have this same privilege and equal health protection. In most instances the county rather than the city is the logical health unit.

For your information, I am enclosing a copy of the bill that was presented in the last legislature which we thought was in harmony with the resolution passed by the Council of the Illinois State Medical Society. You will observe that the provisions of this bill are permissive or optional, not compulsory or mandatory; also that it decentralizes authority from the State Department to the county.

Your attention is called to the fact that a medical health officer not in competition with the local physicians will supervise and prevent abuses by public health nurses, will direct their activities along sane and sensible lines and will decrease and discourage activity of cultists and certain undesirable lay health organizations and aid in safeguarding against the abuse of public charities, undesirable Sheppard-Towner activities, unlicensed midwives, etc.

You must realize that it is out of the question for us to hope for sufficient appropriations to provide a large enough personnel at Springfield to permit this department to adequately handle all school and local epidemics promptly. The time to stop an epidemic is when the first case appears. This can be done better and at much less expense by the county medical health officer if a law is passed permitting employment of a physician for preventive and suppressive health work.

May I urge each and every one of the Delegates to seriously consider the advisability of the Illinois State Medical Society sponsoring a permissive bill in the next session of the legislature which will give medical supervision, which will decentralize and lead away from State medicine, and which will tend to place the medical profession in charge of public health work which is its right.

I wish to assure the members of the House of Delegates that this department will work with the legislative committee and will support to the best of its ability any adequate legislation which the Illinois State Medical Society will propose, which gives promise of the attainment of the objectives outlined above."

Dr. Tuite moved the adoption of this resolution. Motion seconded.

DR. J. W. VAN DERSLICE, Chicago: I believe the House of Delegates has gone on record on several occasions as being opposed to the County Health Officers Bill. I have no reason to change my mind in regard to the bill.

DR. J. E. TUITE, Rockford: The Council passed this resolution.

DR. W. E. KITTLER, Rochelle: The first we heard about this resolution was forty-eight hours before we came to our first meeting. It seems to me the different counties ought to have a chance to have this presented to them and to decide whether they want county health officers in their community. It looks to me as though we were trying to get into state medicine by adopting such a resolution.

DR. E. P. SLOAN, Bloomington: In the state of Illinois there are over 2600 lay health officers and not more than one-fourth of them know they are health officers. Every supervisor is a health officer of his county. You may say this is not important to Chicago. Some of the epidemics that have started downstate have traveled to Chicago just because the county health officers knew nothing about them. There are about 300 public health nurses in Illinois who are making diagnoses because they have no medical supervision. This should be corrected in some way. The state Board of Health would like to have the doctors take it up and see that it is corrected. At the last meeting of the State Board of Health there was a bill proposed which would give the supervision of county health matters to medical health officers. The only joker was that he would have charge of all medical activities, including the nurses, something that the county has not power to do but which cities of over 10,000 have. This

matter should be taken care of by the State Medical Society in some way. I do not believe that we should adopt any one plan but I do believe that we should request our Council and our Legislative Committee to get behind some arrangement that would give medical supervision over these 2600 lay health officers and 300 nurses that have no medical supervision.

DR. J. S. NAGEL, Chicago: This resolution is really asking us to re-affirm the action of the counties. I would like to call upon the Secretary to read the report of the Council.

THE SECRETARY: This resolution was presented to the Council at the meeting on December 8, 1924:

(The Secretary read the Resolutions above quoted by Dr. Rawlings verbatim).

DR. T. B. KNOX, Quincy: My local society is vitally interested in this resolution and I am vitally interested. I cannot understand why this question should be discussed by men who are doing special work, particularly surgery. If you were to ask these men who are discussing the resolution tomorrow where there was an epidemic of scarlet fever or typhoid fever they would not know. My society feels that this is an entering wedge to state medicine. You say you want to keep them out of politics. You cannot do it. My county society is opposed to the adoption of this resolution.

DR. W. D. CHAPMAN, Silvis: I am doing surgical work and I know where there is an epidemic of German measles. I would like to explain at this time that the earlier action of the Council was taken at a time when an objectionable county health officer bill was up for endorsement. Every bill introduced has been found to be objectionable. That resolution seems to us absolutely safe and does not conflict with any bill that has been introduced. The new resolution places no compulsion on any county that does not wish to employ a medical health officer. It leaves the matter entirely to local option but does leave the county medical society free to exercise its influence with the Board of Supervisors for the employment of medical health officers, of whom the county medical society might approve. So far as I know it appears this time as a safe and sane method of combating legislation on the outside.

DR. ANDY HALL, Mt. Vernon: The question is whether these counties prefer to go ahead with

75 per cent health officers who are laymen or whether they would prefer to have physicians as health officers. In my county the worst epidemic of smallpox in recent years was distributed by a health officer of that county who was the supervisor. The epidemic was started by a child who was attending school but who lived outside the city of Mt. Vernon in the township and our health officer had no jurisdiction over that child.

DR. E. H. W. KUPKE, Kenney: I am county health officer and the supervisors want to co-operate with me. I believe in every town if every doctor will take the responsibility and make it clear to the supervisor what should be done and what should not be done, there will be co-operation. If you look a little more to Springfield and ask them to help you you will get along with the local health officers.

DR. T. D. DOAN, Scottville: I think there is a misunderstanding here. It is not a matter of whether the supervisor wants it; it is a matter of his medical knowledge. It is not as though you were passing a law. It is a matter of recommending a change. It is not a step in the direction of state medicine. It is a matter of supervising the county if the county board wishes it done. These supervisors are law-abiding citizens but they do not understand the medical aspects of many things that come up in a community.

DR. J. S. NAGEL, Chicago: It seems to me we are wasting a good deal of time. I move the privilege of the floor to Dr. John R. Neal, Springfield.

DR. JOHN R. NEAL, Springfield: It does not come within the domain of the Legislative Committee to advise what to do. If it is your wish that a bill shall be introduced relative to county health officers, we shall do it. One university in an adjacent state is giving a short course leading to the degree of Doctor of Public Health. Those men are good men. They are scientific men in so far as sanitation goes. Naturally they are going to find a niche in the world and they are going to get into the conditions we are talking about. I am positive that if the medical men throughout the United States had taken the same interest in the Sheppard-Towner bill as did the Illinois medical men, championed by Dr. Whalen in his able editorials for the last four years and by other thinking men, there would not have been any Federal Maternity Act. The

medical men of the United States were responsible for stopping it. Nineteen thousand dollars was sent back to Washington; this was sent to Springfield as a payment for Illinois. You do not want to be supervised from Washington. It is a difficult task sometimes to see why certain legislators vote certain ways. If pressure is brought to bear on a bill, that bill is going to engage the activities of the Health Department at Springfield to empower them to employ Doctors of Public Health who will come into your territory and you are going to accept them if it is state law or you will get a vacation. The Director of Public Health is coming to this body and asking us if there is a problem in which we are interested. If he thinks there is advantage in having medical supervision of every small county in the state, we should heed him. It is no ideal boast when we see that there are 2,400 health officers of whom 2,200 are lay men. I heartily agree with the doctor not to surrender individual rights. I do not know what the problem is. I glean from this communication that we are asked to propose a bill which is acceptable to the State Society, which is an enabling act for a bill to be written by us and acceptable to us, and the very moment the State legislature passes an amendment which is not satisfactory we have the privilege of tearing up our bill. I think we should weigh the matter carefully. I could see great danger in what might be termed the county health officer bill if the Director of Public Health appointed the health officers in those counties. We fought it once and we will fight it again. I do not believe it possible for the 102 counties to agree to accept the bill if it becomes a law. If we in our local society cannot control our board of supervisors by having an ethical medical man appointed as health officer, then our political strength is nil and we are already going under false colors. We cannot start at Washington, we cannot start at Springfield, we have to start in the township in our own counties.

THE VICE-PRESIDENT: There is a motion before the House to affirm the report of the Council made on December 8, 1924. Motion carried.

9. Proposed Amendment to the Constitution

It is proposed by your Committee that the constitution be amended as follows:

1. That Section I, Article 6, be amended to read, "12 councilors" instead of eleven.

2. That Section I of Article 9 be changed to read "12 councilors."

3. That Section II of Article 9 be changed to read "four shall be elected annually to serve for three years."

Dr. Tuite moved the adoption of the amendment. Motion seconded and carried.

THE VICE-PRESIDENT: The next order of business will be the report of the Committee on Medical History by Dr. Lucius H. Zeuch.

DR. LUCIUS H. ZEUCH: I have here some pamphlets containing information regarding the history. The book is about ready. There has been considerable expense involved in its production and we hope to have a good subscription list.

It was moved that the report be accepted. (Motion seconded and carried.)

THE VICE-PRESIDENT: The next order of business is to elect a Councilor for the new Tenth District.

DR. W. D. CHAPMAN, Silvis: In order to make a better balance, I move that this new Councilor be elected for one year. (Motion seconded and carried.)

DR. G. C. OTRICH, Belleville: I nominate Dr. J. S. Templeton of Pickneyville as Councilor for the Tenth District. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Templeton as Councilor of the Tenth District. Motion seconded and carried. Dr. Templeton was declared elected.

THE VICE-PRESIDENT: The next order of business is the selection of a 1927 meeting place.

DR. A. E. WILLIAMS, Rock Island: I wish to present an invitation from the tri-cities, Moline, Rock Island and Davenport.

THE SECRETARY: I have eight telegrams from various officials in Moline inviting the Society to meet there in 1927.

DR. J. S. NAGEL, Chicago: I move that Moline be selected as the next meeting place. (Motion seconded and carried.)

THE VICE-PRESIDENT: I wish now to introduce the newly elected officers.

Dr. G. H. Mundt, President-Elect; Dr. C. S. Nelson, Second Vice-President, and Dr. Cleaves Bennett, Councilor, were introduced and

expressed their appreciation of the honor conferred upon them.

THE SECRETARY: I would like to move that the annual dues for the ensuing year be eight dollars. Motion seconded and carried.

NEW BUSINESS

DR. W. D. CHAPMAN, Silvis: I should like to recite for the House of Delegates an incident which occurred this year which was the cause of very great regret. Three of us were sitting in a room adjoining that in which the Section on Public Health and Hygiene had been meeting when an unassuming man came in and asked us when the session would start. We told him that the Section had finished their program and adjourned at 11:30 in the morning. He said he was supposed to talk before that Section in the afternoon. On a little more conversation it developed that this man was a statistician of national and international repute who had traveled 1,000 miles from Boston at the invitation of one of our Sections to speak before it. He had been in town approximately twenty-four hours and no one had gotten in touch with him. He had been registered at the Inman Hotel. It seems to us that this was a failure of courtesy for which there was no excuse. Somebody fell down hard and I do not know what apology can satisfy the man. I have never before felt there was a failure of courtesy on the part of this Society to any of its guests but I felt that the failure was so great that there was nothing to be said at the time. Thinking it over later it seemed to me that a letter should be written to that man and I do not believe that an expression from the House of Delegates of the Illinois State Medical Society would very greatly assist the Secretary in explaining to Dr. Frederick L. Hoffman that there was no intentional affront and that the Society as a Society sincerely regrets the occurrence. I do not know what occurred among the Section officers but I do know that Dr. Hoffman had never been supplied with a program of the meeting. We were told that he was paged and that his name was on the hotel register. I feel that whoever invited Dr. Hoffman to address that Section was derelict in not getting in touch with his movements or meeting him at the train. It seems to me that an expression from this House would do a little

bit toward salving the injured feelings of Dr. Hoffman.

DR. E. P. SLOAN, Bloomington: I think I heard some man ask the clerk at the Hotel for Dr. Hoffman on Tuesday night. He said he was not registered. If there has been any trouble in Champaign it has been due to the man at the Inman Hotel named Jackson.

DR. C. J. WHALEN, Chicago: Dr. Gould is the Secretary of that Section. Yesterday morning considerably agitated and embarrassed he came to me and asked me if I know anything about where Dr. Hoffman could be found. He said he was registered at the hotel, that notes had been left for him and every effort made to find him but he could not be located. It is not all the fault of the Chairman of the Section.

DR. S. E. MUNSON, Springfield: I want to confirm the remarks made by Dr. Sloan because of the discourtesy with which I was treated this morning.

DR. W. D. CHAPMAN, Silvis: I move that the House of Delegates instruct the Secretary to send to Dr. Frederick L. Hoffman a diplomatic expression of regret on the part of the Society.

DR. E. D. LEVINSOHN, Chicago: I would like to amend that by adding that the Secretary get in touch with the Secretary of the Section and get the details in full.

Amendment accepted. Motion seconded and carried.

DR. J. S. NAGEL, Chicago: I move that the Secretary be instructed to address a letter to the Chamber of Commerce of Urbana-Champaign in regard to the insulting manner in which our members were treated by the Hotel Inman. Motion seconded.

DR. F. P. HAMMOND, Chicago: I am wondering if making a public expression of that kind is in keeping with good judgment. Personally I feel that an expression from a Committee a little bit under cover would be better. Let us send a letter thanking them for their hospitality and then let the Committee go quietly to the authorities and explain this situation.

DR. E. P. SLOAN, Bloomington: I do not believe there is a citizen of Urbana or Champaign who does not feel the same way toward this man Jackson. The proprietor of this hotel has been in politics. I feel that the *Champaign*

News should be furnished with a copy of our resolution.

DR. J. S. NAGEL, Chicago: We were insulted publicly. They were not afraid of any publicity. Motion made by Dr. Nagel carried.

DR. MATHER PFEIFFENBERGER, Alton: I move that the House of Delegates go on record thanking the local Committee for the nice manner in which we have been handled at this convention. We have had the best registration that we have had in years. The Mayor also should be thanked for his courtesy.

Motion seconded and carried.

DR. J. W. HAMILTON, Mt. Vernon: Would it not be a good thing to include the Champaign Medical Society?

THE VICE-PRESIDENT: That will be included in Dr. Pfeifferberger's motion.

DR. J. J. PFLOCK: I would like to thank Dr. Krafft for the courtesy shown the Second Vice-President in asking him to occupy the Chair during part of this morning session.

Adjournment *sine die* at 10:30.

IT MADE A DIFFERENCE

A truant officer made a call at the home of a pupil whose absence had extended for over a week.

"Mikey is now past his thirteenth year," said the boy's mother, "and me and his father think he's after havin' schoolin' enough."

"Schooling enough?" repeated the officer, "Why, I did not finish my education until I was twenty-three."

"Be that so?" said the woman in amazement. Then, reassuringly, after a thoughtful pause: "Well, sor, ye see that boy of ours has b-r-rains."

—*Boston Transcript.*

PSYCHOLOGIC EFFECTS OF TOBACCO SMOKING

Few subjects have aroused such unsatisfactory discussion as has been given to the effects of tobacco smoking. Whereas the "antis" of various sorts place the responsibility for everything from stunted growth to mental deficiency on this habit, its users praise the "delicious weed" as the most soothing of habits, and even assign it a place in medicine as a harmless sedative. Recently the department of psychology of Johns Hopkins University undertook a study of the immediate psychologic effects of tobacco smoking. Eight established psychologic tests were used.

NUTS FOR TWO

Phyllis—"I had such a lovely nut sundae."

Frances—"I have one calling tonight."

—*London Mail.*

Original Articles

CRIMINOLOGY AS RELATED TO ENDOCRINOLOGY*

WM. ENGELBACH, M. D.
ST. LOUIS

Mr. President, Members of the Association, Ladies and Gentlemen: Allow me to express my appreciation of the honor this Association has conferred in extending, for the second time, the privilege of delivering this address.

The subject of the relationship of endocrinology to criminology was thought apropos, not so much because of the recent crime waves in Cicero, Herrin and St. Louis County, but in consideration of the universal increase in criminal tendencies and for the purpose of directing attention to a rarely recognized cause in the commission of illegal acts. Criminologists and jurists ac-



Fig. 1

knowledge the need for more information which may lead to the curbing of criminal instincts and the prevention of crime. Recently Governor Smith of New York appointed a Crime Commission with this aim. A short time ago the Better Government Association of Chicago and Cook County presented a petition to the United States Senate urging a Congressional investigation of outlawry in your metropolis. It is reported that convivial members of a New York night club recently conducted a raid upon a city police station in search of liquor. A considerable space in the daily newspapers is given to misdemeanors, varying from the escapade of a debutante to the exposure of a member of the Cabinet. So there is evident a real need for the scientific study of crime prevention.

*Oration in Medicine before the Illinois State Medical Society, Champaign, Illinois, May 19, 1926.

Criminology is a study which has baffled even the most ardent judicial research and is much too intricate to be abstracted within a limited time. While as variegated as the imagery of a



Fig. 2

woman's mind, the etiology of crime may be divided in a general way into 1, predisposing; and 2, exciting causes. The *predisposing* causes embrace such factors as (a) heredity, environment, acquired habits (such as alcoholic and drug addiction), moral regression resulting as an aftermath of the war, social and sex problems, lack of self and parental control, derogatory "movie"



Fig. 3

influences, and (b) real or imaginary deprivation of personal liberties, low standards of criminal law practice, corrupt politics, easy parole, effective professional bondsmen, laxity of statu-

tory enforcement, etc. It is interesting to contrast the frequency of crimes in this country, augmented by these indirect influences, with the diminished frequency in England and Canada,



A B C
Fig. 4

noted for their prompt conviction and punishment of criminals. On the other hand, differences in moral standards and racial traits in various countries measure the enormity of certain misdemeanors, as, for instance, illicit narcotic



Fig. 5

traffic in this country as compared with China, and the practice of "white slavery" in this country as compared with France and the Orient.

The *exciting* causes of crime refer to those influences which greatly accelerate or inhibit mental activity. The impulse to commit an

overt act must have as a basis a mental attitude which does not discriminate between right and wrong, resulting in a loss of moral obligation and legal responsibility. (a) Among the mental accelerators inducing this instable state of mind are intoxicants (alcohol), narcotics (cocaine and opium derivatives), infections (luetie), and extreme emotionalism (the state of fear, involving a motive of self-preservation). (b) Among the mental inhibitors are inherent personal qualities of an individual effecting a deficiency of intellect, directly leading to delinquency. These exciting etiological factors often originate in a predisposing cause, as heredity, environment, vicious habits, etc. The subject of this discussion is the abnormal mental and physical development characteristic of certain ductless glandular disorder.



Fig. 6

Endocrinology is a branch of medicine which, in its relation to other organs and systems, is gaining recognition. Particularly is this pertinent to a number of ductless glands having a definite influence upon the development and activity of the nervous system, e. g., the thyroid, pituitary, and suprarenal glands. While the potentialities of this interrelation of the internal secretions and the central and autonomic nervous systems have not been exhausted, the information now extant on this subject is sufficient for accurate deductions.

Though all crime may not be placed at the door-step of incretory imbalance, the mental defectiveness and delinquent tendencies sometimes associated with ductless glandular disorder must be accepted as *one* of various exciting causes. In a recent criminal trial the lawyers for the defense attempted to prove that the in-

ternal secretions affected human conduct. The testimony of a medical expert at this trial that he knew nothing of the effects of ductless glandular function upon mental activity should not incriminate the entire medical profession with this same lack of knowledge. It would be just as logical to assume that, because of the possible



Fig. 7

ignorance of one physician on the subject of diabetes, no one in the profession has any knowledge of this disease.

Psychologists for a number of years have tended to this opinion of glandular imbalance, and psychiatrists recently have given their support to this endocrine etiology. The American Association for Mental Hygiene has established clinics throughout the States for the study of delinquent minors before sentence is passed upon them by juvenile courts. Through the courtesy of the Psychiatric Clinic of St. Louis, conducted by Dr. Wm. Nelson, and sponsored by this Association, it has been our privilege to examine a number of these delinquents. A considerable number unquestionably were positive endocrines and their various misdemeanors and errors of conduct attributable to endocrine imbalance. Dr. Nelson, who is a psychiatrist, was more convinced of the endocrine basis for the delinquency of these young boys and girls in many cases than were we.

Dr. Louis A. Lurie of Cincinnati, who is in charge of a similar clinic, informs me that of 450 of these cases studied, 15 per cent were attributable to endocrine disorders. Judge Hartmann, of the Juvenile Court in St. Louis,

has cited numerous instances in which the Clinic has aided his Court in determining if these children were suffering from positive maladies which had induced their delinquency. To separate and properly care for the percentage of delinquent children handicapped by mental or physical defects is an invaluable service to the community. Without such service the juvenile court is compelled to treat all alike, whereas the proper analysis frequently does much toward saving unfortunate young people and preventing the perpetuation of crime.

It is unnecessary in this audience to speak of the effects of large doses of adrenalin or thyroxin upon the nervous system. During the early work with extract of the posterior lobe of the pituitary gland, we were impressed with the effect of this substance upon the mental activity. Through the administration of various-sized doses hypodermically, three types of reaction induced by the active principle of the posterior lobe of the hypophysis were defined. These are the "vascular reaction," the "intestinal reaction," and the "general reaction." We shall speak only of the "general reaction," as this is the one evidencing most marked mental effect. An illustration is the instance of a conservative, retiring spinster who received an untoward dose of pitui-



Fig. 8

tary substance. After reaching the street car she had a severe brain storm, during which she broke several windows and manhandled the conductor and some of the occupants of the car. She was taken to a drug store for treatment, where she was declared either intoxicated or insane. She soon recovered from the effects of the pitui-

tary extract and was surprised and embarrassed to learn of her actions. This untoward "general reaction" can be easily avoided by not giving a larger dose than that which produces the "intestinal reaction." Another illustration of the effect of the disordered function of the hypophysis



Fig. 9

upon the mind is a case of pituitary tumor, which was operated upon by Dr. Allen B. Kanavel of Chicago, nine years ago. This patient recently returned for observation to see if he could not be relieved of a peculiar hallucination, described as a sensation as if caterpillars were constantly crawling from his mouth and nose, over his food, etc. The abnormal mental activity in clinical hyperthyroidism or thyrotoxic states is too well known to need further emphasis.

These accepted procedures confirm the relation of incretory imbalance to mental activity, moral conduct, and criminal tendencies. We believe that the field of endocrinology is sufficiently developed to command increased interest in this application. Particular effort should be directed to the prevention of ductless glandular disorder at an early age. One may seem pretentious in stating that preventive measures, to be of most value, should be undertaken in the embryonic or natal age in hypothyroidism. If preventive therapy does not intercede at this time, during the formative stage of the nervous system, the hereditary influence producing this aberrancy of development will obtain and in later life is less amenable to treatment. Eugenics should be employed as far as possible. Such measures are

already in force in some of the states. For instance, in Ohio condemned criminals are castrated. Whether this inhumane principle can be universally adopted is a question.

With regard to hypothyroidism, one of the chief endocrine causes of retarded mentality and delinquency, Dr. Alphonse McMahon and I believe that we have developed two means of determining whether the thyroid of the mother has responded to the normal demand during pregnancy. These consist of 1, estimation of the basal metabolic rate during pregnancy; and 2, x-ray of the osseous system of the infant soon after birth. We discovered that the basal metabolic rate after the third month of gestation is increased from +15 per cent to +25 per cent in those gravid women whose thyroids respond normally. Estimation of the basal metabolism in a number of women during pregnancy showed that in a certain percentage, but not in all cases, this increased rate was present. It has long been known clinically that many women have a slight thyroid enlargement during gestation, which disappears following the termination of this state, and these are less subject to the toxemias of preg-



Fig. 10

nancy. In those instances in which there is a slight increase in the basal metabolic rate, the infant at birth is usually of normal size (6 to 8 lbs.) and x-ray within ten days after birth reveals a normal development of the osseous system. In those cases not having this increased rate during pregnancy, the infant tends to overweight at birth, does not exhibit all of the osseous

nuclei normal for this age and later in life is subject to anomalies of growth and development, as late dentition, late walking, late locomotion, and mental deficiency. Others have confirmed these theories regarding the increase in the basal metabolic rate of the *normal* gravid



A

B

Fig. 11

women. For this reason, we believe the basal metabolic rate to be a more important indication of the fetal development, particularly as to the nervous system and size, than any other clinical sign. It surely is of more significance than the urinary analysis, physical examination, and measurements usually employed by gynecologists.

The second sign considered of value in determining a possible hypothyroidism *at birth* is radiographic examination of the osseous system of the infant. At birth, according to our observations, the nuclei of the lower epiphysis of the femur, the upper epiphysis of the tibia, and two or three tarsal bones (talus, calcaneus and cuboid) are normally present. For the purpose of early diagnosing hypothyroidism and separating it from other infantile obesities, in an attempt to prevent the later tragedy of cretinism, roentgenograms of babies weighing more than eight pounds at birth should be made. X-ray of the knee and ankle only is required, as at this age only these bones offer information with regard to thyroid function. If it is found that ossification is retarded, thyroid therapy should be administered to the infant during the first year, in order to avert the consequence of defective thyroid function. The gravid mother who does not have an increased basal metabolic rate (ranging from +15 per cent to +25 per

cent) following the third month of pregnancy, should receive thyroid treatment to insure normal development of the fetus and prevent its overgrowth, with the incidental danger of delivery of a monster and the physical and mental incompetency of later life.

To illustrate the relationship of the internal secretions not only to mental activity, but also to abnormal mental, and sometimes criminal, instincts, a few lantern slides of clinical cases regarded as positive examples of various groups of ductless glandular disorder having such proclivities will be exhibited.

Fig. 1 illustrates a girl aged seventeen, who was one of the cases referred for endocrine study by the St. Louis Psychiatric Clinic. She exhibited definite evidence of what we believe to be suprarenal cortex disorder. You may note from the posterior view, on the right, the inverse statural development for her sex (wide hips, genu varum). From the posterior view one would suspect an individual of the male sex. The anterior view does not show the hypertrichosis (excessive hair growth) which, though quite diffuse, was difficult to photograph. She had



Fig. 12

been adopted at the age of five into surroundings of refinement and culture and evidently had been unable to adjust herself to her environment. Her instability manifested itself in her leaving home for various periods, during which she debauched herself in lower levels of society. From the

physical and neuropsychiatric standpoints she apparently was normal, but her endocrine markings grouped her with the suprarenal cortex disorders.

Fig. 2 is a physician's daughter aged twenty, very similar to the previous case, referred for what was thought to be a dementia precox. Her chief complaints were loss of interest in all activities, extreme timidity and reserve, with a "shut-in" complex, irregular menses, and somnolence. Until adolescence (at the age of thirteen) she had been a bright, active child, leading her classes at school and participating prominently in the social activities of her age in her community. With the onset of menstruation she began to change decidedly mentally and developed a marked hypertrichosis (noticeable in the illustration.) She lost all initiative and sense of responsibility. At times she would not speak to her mother or brother for several days, preferring solitude. Her psychic stigmata increased and she developed a definite inferiority complex.

Fig. 3 illustrates a classical hypogonadism aged thirty, who had almost a complete absence of ovarian function. You may note the trochanteric adiposity and the hypotrichosis (absence of hair growth) characteristic of this endocrine type. Other positive signs, as eunuchoid proportions, orthodontal markings, etc., were present. This girl was practically asexual, having long intervals of amenorrhea, with an occasional scanty period. This probably accounted for her peculiar earlier homo-sexual relationship, as well as her polygamous tendencies later in life.

Fig. 4 (A, B and C) illustrates three individuals aged four, six and eleven respectively, whom we have classified as hyperpineal (C shown through courtesy of Dr. Wm. McKim Marriott, St. Louis). These are cases of macrogenitosomia, or pubertas precox, demonstrated merely to show their hypergenitalism at this age. The central figure (B), six years of age, was so hypersexual that he attempted rape upon his mother.

Fig. 5 shows the first boy of the preceding illustration, aged four, as compared with a normal boy thirteen years old (on the left), and the same case as compared with a normal boy aged four (on the right). It may be noted that none of these cases has an excessive hair growth, as usually present in hypergenitalism associated with suprarenal cortex disorder.

Fig. 6 is a girl fourteen years old (on the

right), her baby picture being shown on the left. She also, in our opinion, has a hyperpinealism. She was referred because of her short stature, her parents desiring to know if anything could be done to increase her height. X-ray of the epiphyses revealed all of them fused, as characteristic of any hypergenital state and as opposed to the delayed epiphyseal fusion of hypogonadism, or eunuchoidism. In this case of female hyperpinealism the menses began at the age of six months and at two years the menstrual flow was as profuse and regular as her mother's. Additional proof of this diagnosis is the absence of overgrowth of hair, as found in hypergenital states due to suprarenal cortex disorder.

Fig. 7 is a pseudo-hermaphroditism (shown through courtesy of Dr. Arthur G. Bosler, of Chicago). You may note the marked hypergenitalism, without increased hair growth, indicating that the hypergenitalism is probably related to the pineal gland and does not have its origin in the cortex of the suprarenal. *These pseudo-hermaphrodites are no longer considered as local anatomical malformations of the genital tract, but are classified by endocrinologists as primary endocrines having a secondary objective genital anomaly.* The majority of these individuals, as is known, deviate from the normal sexual reactions early in life.

Fig. 8 is shown in contrast to the previous hypotrichosis (absence of hair growth) as a suprarenal cortex disorder having a marked facial hypertrichosis (excessive growth of hair). The sexual sphere of this individual varied a great deal. She at first had a decided hypersexuality with normal menses, which later became changed to the opposite state of amenorrhea, asexuality, and frigidity.

Fig. 9 is a definite illustration of the relation of endocrine disorder to moral conduct. This patient, aged thirty-one, presented himself for a hypersexuality. He had the positive signs of acromegaly, as evidenced in the x-ray of the osseous system, orthodontal changes, pigmentation of the forehead, etc. He was a member of a religious order which required celibacy. He was unusually conscientious in the work of his order, and during ten years had risen to a high standing due to his mental ability. Yet, notwithstanding his religious faith, philosophy, and the extreme discipline of this order, his inability to

control his sexual impulses finally caused him to resign.

Fig. 10 is an illustration selected from Klebs and Fritsche (upper) and from Cushing (lower), showing the marked osseous changes occurring in acromegaly. You may note the kyphosis and turtle neck in the upper illustration, a common posture of the gunman; and in the lower the transition in physiognomy from a refined, intellectual type to a coarse, morbid expression.

Fig. 11 illustrates the classical features of a myxedema (A, before; and B, after treatment). This woman was referred to us after having been adjudged insane by an Illinois court following a brain storm, during which she practically wrecked a knick-knack store in her neighborhood. We have noted in our collection of myxedemas that, after recovery, a majority admit that they thought they were becoming insane. This is merely due to the progressive mental inhibition, producing loss of memory, mental confusion, and lack of acuity of perception, which gradually increases unless they are relieved by thyroid treatment. In this case, after recovery, legal process was necessary to reclaim her from the asylum.

Fig. 12 is the roentgenogram of what is considered a normal infant at twelve days. You may note that the nuclei of the lower epiphysis of the femur, the upper epiphysis of the tibia, and two tarsal centers (talus and calcaneus) are present. A third tarsal center (cuboid) is sometimes present. Absence of the nucleus of either of these long bone epiphyses or of either the talus or calcaneus we have noted as an early differential sign during the first few weeks of life, identifying hypothyroidism in distinction from similar diseases, as moronity.

FURTHER OBSERVATIONS IN THE USE OF COLLOIDAL GOLD IN IN- OPERABLE CANCER*

EDWARD H. OCHSNER, B. S., M. D., F. A. C. S.
Attending Surgeon, Augustana Hospital
CHICAGO

Whenever for any reason a cancer develops to the point where it can no longer be removed with the knife or cautery with a fair chance of complete eradication and reasonable safety to the patient, the case is desperate and often piti-

ful. My own experience which covers a period of thirty-two years is to the effect that all the remedies heretofore suggested and employed in inoperable cancer are of very doubtful value in saving the patient's life and often actually increase the discomfort and misery.

We are credibly informed that 100,000 persons die annually in the United States alone of cancer and most of these suffer great discomfort and pain during at least a portion of their illness in spite of all that medical science is able to do for them. Even morphin often fails to relieve their suffering. Any remedy which will even occasionally save the life of a cancer patient that has reached the inoperable stage or which will materially reduce the suffering of a considerable number of this class of patients is worthy of consideration by all the members of the medical profession as not only the general practitioner but practically every specialist is confronted with this problem at least occasionally.

Personally, I have long been inclined to the belief that cancer is an infectious disease because in its symptomatology its clinical picture corresponds in nearly every detail with many of the infectious diseases with which we are familiar. There is one great difference, however, namely, that the time intervening between the inoculation and the other symptoms seems to be much longer in cancer than in any of the other infectious diseases. If we compare a cancer of the finger, for instance, with a felon, we have in the former, first, the local cancer, later, the regional lymph involvement and if these are not efficiently dealt with and the cancer cells or germs pass the terminal filter and get into the blood stream we either get generalized carcinomatosis or metastasis. In a felon we have a local inflammation with or without an accumulation of pus, regional lymph gland involvement and if the microorganisms pass the terminal filter we get either a septicemia or pyogenic abscess; or, again, compare a cancer of the lip with a chancre of the lip. In the former, we have first the local lip cancer then the involvement of the cervical lymph glands and if the last filter is passed we get either generalized carcinomatosis or metastasis. In syphilis of the lip, we have the chancre, then the regional lymph gland involvement and if not effectively treated syphalemia with its gen-

*Paper read before the Illinois State Medical Society, at Champaign, Illinois, May 18, 1926.

eralized syphilis, skin lesions, gummata, involvement of the central nervous system, etc. Certainly the similarity is so striking that it is difficult to dispel the thought that their etiology is fundamentally alike.

If cancer is a microbic disease, it is our business to find a specific just as we have already succeeded in doing in such diseases as syphilis, malaria, tetanus, specific inguinal adenitis, malignant edema, impetigo contagiosa, actinomycosis, and a considerable number of other diseases, for I am a firm believer in the doctrine that there is a specific for every infective disease. All we need to do is to continue our search until such a specific is found. I have held this belief for many years and my faith in its correctness has been so strong that for more than twenty years I have been assiduously searching for such a specific using various remedies in surgically hopeless cases of cancer, and I have found several remedies that I am convinced have a specific action upon cancer. The most potent of these is, I believe, a pure colloidal gold suspended in pure water, for I have seen many cases in which the tumor has actually decreased in size, the general health of the patient has markedly improved, the pain and discomfort have decidedly decreased, and I have seen a few cases where the cancer tissue could not be removed with the knife or cautery that have been cured and remained cured for a number of years.

On February 20, 1924, I read a paper before the Chicago Medical Society on "Some Newer Developments in the Non-Operative Treatment of Cancer." This paper was published in *Clinical Medicine*, October, 1924. Case No. 1 therein reported is still well after a period of over five years as per report from his family physician, Dr. Gustave E. Eck of Lake Mills, Wisconsin, under date of April 5, 1926.

Case No. 3 therein reported is still well as per report from his family physician, Dr. C. W. McPherson of Hazelhurst, Illinois:

Further case reports: Mr. C. L., aged 73 years. From the history taken October 1, 1925, I take the following essential facts: One year before admission to hospital patient had had attacks of incontinence of feces for two or three weeks. Shortly thereafter he was examined by one of America's most competent surgeons who advised against an operation because the cancer had already extended onto the base of the bladder, was adherent to the pelvis and because it was causing no intestinal obstruction. On admission patient

was extremely emaciated and cachectic. A definite fungating mass extending to within two inches of the anus was felt; upper border could not be reached by examining finger, pelvis almost completely filled with carcinomatous tissue." Gave colloidal gold by mouth, intravenously, and by passing catheter above the tumor mass, and then injecting one dram once a day and allowing it to trickle down over the carcinomatous tissue. Patient under observation one month at the end of which time he returned to his home. Under date of December 22, 1925, letter received from patient from which I take the following: "I am now able to sit up without any discomfort and am also gaining in strength." Under date of March 1, 1926, his family physician reported that the patient had gained fourteen pounds since leaving the hospital; growth had markedly decreased and patient's general condition had been one of comfort. Under date of April 15, the physician reported that while the patient is comfortable he is beginning to lose strength.

Another typical case of cancer of the rectum, Dr. J. E. B., aged 53 years, in January, 1924, noticed blood in stools which increased until May of same year, when pain developed in rectum on defecation. Pain on defecation increased in severity until August of same year when an inguinal colostomy was performed by a competent surgeon who assured the patient's wife that a radical operation was impossible. Patient first seen by me December 1, 1924, when the pelvis was filled with a cancerous mass. The patient was in excruciating pain almost constantly; even half-grain doses of morphin given at intervals of two or three hours did not control the pain. Patient was placed on colloidal gold by mouth. A dram of the colloidal gold solution in one ounce of water was injected into the lower colostomy opening daily and even by the 16th day of December when he left the hospital the pain had decreased to the point where one-quarter grain of morphin given three times per day made him perfectly comfortable. On May 14, 1925, I received a letter from his wife from which I take the following essential points: "His complexion is ruddy, appetite fine, strength as usual and weight about the same for the past three months. There has been no bloody discharge from the rectum for several weeks." On October 1, 1925, I received the following letter: "There has been no passage from rectum for over two weeks and where the pain first began there is none to speak of and the raw surfaces which resembled pile tumors have ceased to be painful and are almost entirely healed. The discharge through the lower colostomy opening from the tumor is much less and of a uniform color, no blood clots and no sloughing. The pain is now in the region of the upper part of the rectum but so much less that from one to two quarter grain tablets of morphin control it in twenty-four hours. He sleeps more than when I wrote you last, eats little and is getting progressively weaker." Subsequently, I was informed that the emaciation continued and the patient died.

On February 22, 1922, Mrs. E. M., aged 64 years, presented herself for examination, giving the follow-

ing history: Following operation on finger at fifty, sugar was found in urine and has been under treatment and diet since. At times urine negative, but patient thinks that tolerance for sugar not as good during the past two years as previously. Left breast amputated at fifty-six by competent surgeon who made the diagnosis of carcinoma clinically which was subsequently confirmed by the microscope. On examination, somewhat cachectic, complexion subicteric, blood Wassermann negative, weight 125 pounds, mastectomy scar well healed but on inner edge is an irregular indurated area about four c. m. in diameter and one c. m. thick adherent to rib. Patient was placed on colloidal gold and under date of December 27, 1922, I find the note—carcinoma nodule somewhat smaller; under date of January 17, 1923, carcinoma nodules softer and freely movable on rib; under date of May 8, 1923, carcinoma nodule has entirely disappeared and remained so until December 10, 1924, when patient was not seen until March 3, 1925, at which time there was again a slight induration and patient was placed on colloidal gold again. Under date of September 24, 1925, the scar was clear again, but patient stopped the use of colloidal gold on November 17, 1925, there was some recurrence in the scar which has remained about the same since the above date in spite of the use of colloidal gold. Patient has for four years and two months retained approximately the same weight as on first examination—and is fairly comfortable in spite of her recurrent carcinoma and diabetes.

Mrs. J. H., aged 70 years, examined July 30, 1922, gives history of having had small wart on inside of left foot for about six months. No trouble until four months ago when she scratched wart which gradually increased in size, becoming ulcerated and very painful. About six months ago, also noticed small hard lump, size of a marble in left breast, which the past three months has rapidly grown in size. Examination reveals a hard mass about size of patient's fist in upper outer quadrant of left breast extending into axilla adherent to overlying bluish purple skin, a fluctuating area about three c. m. in diameter, and on inner surface of left foot an indurated ulcer about four c. m. in diameter with hard projecting edges. Tumors of breast and foot excised. The following microscopic diagnosis was made: Epithelioma of foot and carcinoma of breast. Nine months later recurrence in left breast size of navel orange. Tumor mass again excised and microscopic diagnosis of carcinoma rendered by pathologist. At time of the last operation the tumor mass was so extensive and adherent that there seemed to be no prospect of permanent recovery. Patient was placed on colloidal gold for six months and when seen a month ago was in perfect health.

Mr. A. L., aged 77 years, came under my care February 23, 1926, with a history that six years previously a small growth developed on left upper lip which has gradually increased in size and on examination was irregular in outline, cauliflower in appearance, about four c. m. in diameter, ulcerated, covered with

foul smelling membrane. At the same time the patient had a similar growth behind the right ear three by two c. m. in diameter and another one on the anterior surface of the helix of same ear about one c. m. in diameter. Patient was willing to and did submit to an excision of the tumor of his upper lip but was unwilling to submit to an excision of the other tumors fearing too much deformity of the ear. He was operated on February 26, for epithelioma of the left upper lip; clinical diagnosis confirmed by pathologist. He was placed on colloidal gold March 1, and when examined May 5, there was no recurrence at the point of excision, the epithelioma of his ear was entirely healed, the skin was perfectly smooth and the epithelioma behind his ear was less than one-third of its original size. The above case parallels very well a number of cases of keratosis senilis which I have treated with this remedy. The lesions in these cases were apparently in the transition stage from keratosis senilis to epithelioma and the employment of colloidal gold resulted in a rapid disappearance of the lesions, and it is in these cases of multiple skin lesions, too numerous for excision and which are likely to become cancerous, where colloidal gold cannot be too strongly recommended.

The foregoing histories form but a small per cent. of the total number of inoperable cases of carcinoma treated by me with colloidal gold during the past five years. In order to ascertain what results other observers have had with the remedy, I sent out a circular letter February 1, 1926, to such physicians as had had correspondence with me in reference to inoperable cases of cancer where I had recommended the use of the remedy. In response to this circular letter I received 182 replies with reports on 309 cases. Of this number six cases were reported cured; thirty-two cases were reported greatly improved; twenty-seven cases reported improved; five cases pain lessened and nutrition improved but tumor mass progressing; ninety-seven cases inconclusive because time of treatment was too short; sixty-one cases pain much less severe during treatment but patient subsequently died; eighty cases where no improvement in the condition during treatment was observed. Only one of the number condemned the remedy and in that case it was evident that the solution which had been injected intravenously had not been properly sterilized. I report the following typical letter of those containing favorable experience with the remedy. Case reported by Dr. L. E. Shephard of Brandon, Wisconsin:

I have one case under treatment which seems to be doing well. It is a case of recurrent cancer of the

breast, having been removed by Dr. ——. When the woman came under my care she was very weak, losing flesh rapidly, had a tumor on the sternum with several nodules in surrounding tissues. Since taking colloidal gold she has begun to gain in weight, eats everything and is generally greatly improved.

Refer you also to a case report in Volume 25, No. 3, March, 1926, number of *The Wisconsin Medical Journal* by Louis H. Nowack, M. D., of Watertown, Wisconsin — "Papillary-Adeno Carcinoma of the Ovary" followed by recurrence which appears to have been cured by the administration of the remedy here advocated. This patient had a large recurrent tumor and was reduced to approximately one hundred pounds when the administration of the tumor had disappeared and she had regained her normal weight of one hundred seventy-three pounds.

The remedy which I have been using in all my cases is a pure colloidal gold suspended in pure water of uniform strength which represents 1/1000th of a grain of pure gold to every ten minims of solution and is manufactured by the Kahlenberg Laboratories, Inc., of Two Rivers, Wisconsin. It is relatively stable; can be secured at a moderate price considering the size of the dose employed. I make this explanation because at least one of the colloidal gold preparations on the market contains as high as one per cent. gum as stabilizer and also contains considerable chloride of gold. The latter is objectionable because chloride of gold is much more toxic than is the pure colloidal gold. Whether the former is objectionable or not I do not know, but as the potency of the colloidal preparation depends very largely upon the minuteness of the particles of gold in suspension it is a question whether such gum stabilizer may not interfere seriously with the action of the drug by forming a fine coating of the individual particles of the metal. The mode of administration which I have employed has consisted in starting the patient on ten drops of this solution in half a wineglassful of water one hour before each meal and increasing one drop daily up to tolerance. Some patients may take as high as sixty drops three times a day—others will begin to show slight gastro-intestinal irritation such as beefy tongue, burning of gullet, heartburn, colicky pains and tenesmus. If any of these symptoms occur, I drop back ten drops and continue with the same dose for months at

a time. In cases of carcinoma of the esophagus or stomach where the remedy comes in direct contact with the cancer mass this is the sole method of administration. In cases of cancer of the mouth, I pack the cancerous area with a piece of gauze saturated in the solution in addition to giving the remedy by stomach. In cases of cancer of the rectum, I either pour the remedy into the lower limb of the colostomy wound, if such has been made, or pass a catheter past the tumor mass and inject the remedy above the tumor mass permitting it to trickle down over the cancerous area, in addition to the mouth administration. In cases where the remedy can not be locally applied, I give from one to five cc. of a sterile solution, which can now be obtained in ampules, intravenously one to three times a week.

From the above case reports, the letters of 182 physicians, and my personal experience covering a period of over five years, I believe we have a right to conclude that colloidal gold thus administered is of distinct benefit to otherwise hopeless cases of carcinoma and that it has an inhibitory effect upon the cancer growth and affects beneficially the resisting ability of the cancer patient. This is best exemplified by the increase in weight of these patients, their general improvement in strength and general well-being and also in the noticeable improvement in the blood picture which has not only been observed by myself but is repeated over and over again in the letters which I have received. Thus, for instance, I have one case in which the blood picture changed from hemoglobin 35, red blood corpuscles 2,250,000, white blood corpuscles 8,000, color index 0.79 to hemoglobin 70, red corpuscles 5,430,000, white blood corpuscles 13,500, color index 0.65 in a period of seventy-seven days. I do not see how anyone can see these cases improve, the tumors melt away, multiple lesions of keratosis senilis disappear, the patient's general health, weight and strength improved, the pain greatly ameliorated or entirely relieved, without concluding that colloidal gold has a beneficial effect in otherwise hopeless cases and I wish here to repeat with even greater emphasis than on that occasion my conclusions of two years ago: 1. "That in every case in which the carcinoma is accessible to the knife or the cautery, the tumor should be removed and that then the patient should be given colloidal gold

for a considerable period of time." 2. "That those cases which are inoperable should be given this remedy in suitable doses, both by mouth and intravenously, as I believe it to be the best remedy so far discovered in the treatment of this type of cases."

In addition I would at this time add that I believe that as a prophylactic following operations for cancer colloidal gold properly administered has no equal.

2155 Cleveland Avenue.

DISCUSSION

Dr. G. W. Boot, Chicago: It happens that I gave the adverse report that Dr. Ochsner mentioned and, contrary to his statement, there is every reason to believe that the solution was properly sterilized for I sterilized it myself and I know that the directions were followed to the letter. The patient was my wife. Following Dr. Ochsner's published recommendation of colloidaurum I gave her the remedy several times per oram and then by intravenous injections. The first intravenous injection was without noticeable result, as was also the second, but *the third caused such a severe anaphylactic shock that she nearly died from it. There was purging, vomiting, abdominal distress and almost complete absence of the pulse.* I have never seen a worse case of anaphylactic shock except when the patient died from it. Fortunately she rallied from the shock. Colloidaurum may be a good remedy, but *look out for anaphylactic shock.*

Dr. B. G. Baird, Galesburg: May I ask Dr. Ochsner if he intends to convey the impression that we should never use x-ray or radium except in inoperable cancer.

Dr. E. H. Ochsner, Chicago (closing the discussion): Dr. Boot's letter was the one that condemned the remedy. I had a few cases that had slight chills following the injection but you get that with any intravenous injection. In the early days before we had the ampules there was that trouble. The Doctor said it was properly sterilized and we have to take his word for it. My impression from the letter I received was that the solution was not properly sterilized.

The increased comfort these patients have over the other methods of treatment is quite remarkable. I wish I could show you the letters I have had from some of the individuals who have gotten comfort from the remedy.

As I said at the very start, for these cases which are operable I certainly would condemn the use of any remedy with so small a percentage of cures just as I would condemn with all the power within me the use of radium and x-ray in operable cases. I think it is wicked to use either radium or x-ray or this remedy in operable cases because the percentage of cures by any of these methods is so infinitely small and the percentage of cures by operation where the cancer is accessible is so much greater. I had a patient come to me the other day with a very simple epithelioma

of the lip that was being treated by radium. I wish I had the power of using the English language strong enough to condemn the use of any remedy except surgery in operable cases. For the present at least I believe this is the best remedy we have in these absolutely inoperable cases.

In answer to Dr. Baird, yes I think so. I will not definitely condemn x-ray or radium post-operatively, but I think when a case is accessible to the knife or cautery surgery should be employed. Following operation is a different proposition.

ADDRESS*

DAVID KINLEY, PH.D., LL.D.,

President University of Illinois

CHAMPAIGN-URBANA

Mr. President and Members of the State Medical Society:

I have never been able to address an audience of doctors without making, to myself, a comparison of their work in its relation to human welfare with that of other professions. The doctor, like the rest of us, wants to make his living. He rightly expects to make it by charging proper fees to those he treats. Yet the practice of his profession, by its very nature, confers benefits upon men that seem far out of proportion to the rewards and are not paralleled in other professions. To assuage pain, to alleviate suffering, to cure disease, to save life—these things have a value not expressible in money. If it be true that "all that man hath will he give for his life," then the doctor who saves a life is never adequately recompensed even from the point of view of the patient. But you have learned that you cannot demand "all that the traffic will bear." I presume that in the great profession which you follow there is probably a due proportion of scalawags just as is the case in all other professions. Yet when a layman thinks of you, he inclines rather to think in terms of the family doctor who knows all our secrets, who knows all about the members of our family; who has ushered some of them into the world and perhaps has done his best to prevent the early departure of some, to whom we have turned in sorrow and whose moral courage and self-sacrifice have been a strengthening influence in our days of darkness. The wonderful response which, through the centuries, physicians have made to this high demand is one of the

*Address to the Illinois State Medical Society, Tuesday, May 18, 1926.

glories of your profession. I am one of those who have a profound respect for that profession and honor you who follow it. It is a privilege which I appreciate highly that you give me the opportunity to address you this evening.

The education necessary for a man who is to have such relationship with his individual clients as you doctors have is a matter of interest to the public as well as to the profession. What is "the best education for a doctor" is a subject that has been discussed a long time and on which no unanimity of agreement has ever appeared or is ever likely to appear. In the practice of medicine there is one important element of success that cannot be supplied by the schools. The element is usually called common sense. The doctor needs this more, if anything, than anybody else because he deals with individuals so intimately and when they are in an abnormal condition. No curriculum can supply this. Common sense means simply sound judgment. This is born in a man and may be improved by long experience. It cannot be learned from a professional curriculum.

Therefore, it is the professional curriculum, ordinarily so-called, that we have to deal with in the discussion of what we call medical education. I ask your attention for a few minutes tonight to certain influences affecting medical education as they appear to a layman, and a suggestion or two as to the results of those influences.

Medical education as to its content and its methods, is subject to constant criticism. There is nothing new about this and there is nothing in it other than encouraging. There has been a great change, as we all know, in the character of medical education in the past twenty years. Notwithstanding the progress that has been made, there is no department of our education that is today more in need of critical examination from the point of view of educational experience and method than is our medical teaching. President Butler remarked five or six years ago that "the ordinary medical school curriculum is a thing of shreds and patches and by no means a well conceived organic unity based upon a clear-cut conception of the aim and scope of undergraduate medical instruction." (President's Report, 1921.) I presume the same remark is true in a degree about pretty nearly every other prescribed curriculum, at least at five-year inter-

vals. But the medical curriculum is peculiarly open to the criticism because of the numerous agencies which share in making it up.

Some of the principal criticisms of present medical education are that the standard of the schools is too high, although we are not told for what it is too high; that the curriculum is too specialized and is not educating doctors for general practice, but leading students off into the byways of the specialties; that the course is too long and turns the young men out after they have lost their adaptability; that the course is too short for any one to learn all that he ought to learn to be a good doctor; that the curriculum is too dehumanized, or, if you please, too scientific, turning the attention of the practitioner away from the patient to the fundamental sciences and the scientific methods; and finally, that the course is too expensive. There are other criticisms, but these serve to illustrate my point that "plenty is being said." Of course, some of the views are extreme and need not be taken too seriously. When, in a diatribe against the existing curriculum, one lecturer refers to a physician of great reputation a generation or so ago and uses the fact that he attended only five lectures in a certain subject to prove that the present course of study in that subject is unnecessarily long, we can only say that the enthusiasm of the speaker ran away with his judgment. We are all ready to admit with reference to the lectures of any one of us that perhaps a student may become great if he hears only five of them, and may become greater if he doesn't hear any of them. But that course of reasoning proves too much. Such criticisms are not helpful.

The causes which have produced this state of affairs, the influences affecting the course of study are of two general classes. I call them internal and external. The former arise in part from the character of the necessary subjects of study and in part from the character and point of view of medical faculties.

More numerous and more potent are the group of what I call external influences tending to determine the character of medical as well, indeed, as of other education. I will not dwell upon the pressure of the general public or sections of it for the establishment of new departments and the teaching of new subjects. The demand that universities shall give courses in this or in that is continuous, persistent and vociferous, making

itself heard in pretty nearly every department of instruction.

Next to the influence of the general public is, undoubtedly, that of the various professional associations, of which yours is an example. Pretty nearly every professional and vocational subject now is standardized more or less by associations made up either of those who practice it or of those who teach it. In some cases the results have been good. In some they have been bad or doubtful. I give as an illustration of the influence of these outside agencies, the action taken three or four years ago at a convention of three associations, one of them educational, in another field than medicine. They determined that a college or school in this field, if it were to receive recognition by their "Boards" must meet half a dozen or more requirements set up without consultation with, or reference to, the educational institutions themselves. They prescribed the legal character of the institution, the kind of laboratories and subjects of study in them, the minimum number of the faculty and to a certain extent its organization, the length of the course of instruction—dividing the time between didactic and laboratory instruction—the length of the year's session, the amount of work per week, and the admission requirements. Yet few of the gentlemen who set up these standards were practical educators; and those who were constituted a small minority of their faculties. One great difficulty with such enactments is that once made, they are very difficult to change when they are wrong.

As President Coffman of the University of Minnesota pointed out in an address three or four years ago, "There was, for example, a time when the American Medical Association insisted upon the teaching of a full year of physics in the premedical courses. It still makes this requirement, and yet every one knows perfectly well that the next generation of physiologists will have far less training in physics and much more training in chemistry than the last generation has had. A change of emphasis should be made but it cannot be brought about, at least not quickly. Departments have been provided in universities for the teaching of physics, equipment has been purchased, a staff has been secured. Furthermore, the American Medical Association, which lays down this requirement, usually meets only once a year, and its represen-

tatives are made up of men who have had much training in physics and little in chemistry. It does not follow because one is a successful practitioner in some field, or because he is a specialist in some one of the professional schools or colleges that the judgment of his group should be accepted without check as fulfilling curriculum requirements. Such judgments cannot and should not be ignored. They are of paramount importance. Surely those who are in a position to know what progress is being made in related sciences should also be given a voice in the determination of such a matter."

Aside from the national, the state, the county, and other medical associations, the curriculum of the schools of medicine is influenced and, indeed, in no small degree determined, by the various state medical boards acting under the laws of their various states. I need not go into details regarding this particular influence. Students in any medical school, certainly in any large medical school, even though they be all residents of the same state, look forward to practicing in different states and, therefore, must be able to meet the requirements of the laws of the state in which they desire to settle.

I will not do more than mention the existence of national organization. These are less in evidence in medicine, although I believe one does exist, than they are in some other lines. On the whole they are able not simply to exert influence, but are usually driving towards a position of authority. Not only this, but there is ground for believing that in some lines an effort is under way to bring our subjects of study under the influence, more or less, of international standards and bodies. I think the promoters of the movement call it coordinating or cooperating. If you don't join in the movement then you are not cooperative in spirit. For you must understand that to be a cooperator in any matter of that kind is to let the other fellow determine what he wants and then fall in with his plans. Every administrator of a state university knows cooperating in this sense in agriculture, in home economics, in "Smith-Hughes" and "Smith-Lever" work.

Next to the professional and scientific associations I might mention the educational associations of which the Association of American Medical Colleges is one. Some of these associations, I am not sure about this one, started as a

meeting of deans or perhaps, more villainous still, of presidents, of various institutions. They indulged in much discussion and in due time decided to inform the institutions which they respectively came from that if they expected to be recognized (potent word) by this association they must do so and so. In other words, some members of the faculties organized an association and, without the consent of their colleagues on the various faculties, adopted certain standards involving their respective institutions. The institutions had to accept those under penalty of being not "listed in class A."

The alumni, with due right and propriety, have in large degree influenced the character and direction of growth of our institutions, particularly in the professional and vocational fields. Their advice too is always welcome and usually valuable although some of them forget at times that being in the practice of a profession and not in education, they, like the educators, may be viewing the situation from a peculiar angle.

I will not take time to mention the large number of other kinds of organizations that undertake to pass upon or standardize education. I notice, or think I notice, a tendency for the number to grow, with headquarters largely in the east, and with a tendency towards what in business would be called interlocking directorates, that in time may be a source of pressure on the educational institutions of the country. I have in mind such organizations as the American Council on Education, the Institute of International Education and others whose names will occur to you. The good, if it is a good, the evil, if it is an evil, is not confined to the medical curriculum. It reaches the curricula in engineering, pharmacy, dentistry, law, business, the liberal arts, agriculture—indeed every department of higher education. There are the associations of teachers of this and that, through the whole list of subjects taught, each of them in due time putting up new requirements without much consideration either of their need, their educational usefulness, their adaptability to particular institutions, or the means of putting them into effect. "There are associations of deans of men, deans of women, comptrollers, bursars, personnel officers, superintendents of buildings and grounds, registrars, purchasing agents, accountants." I think I have heard of an association of janitors. Then there are new

ones coming in. President Coffman, in the address I have already referred to, mentions the "Intelligence Testers Association." Later comers are the fundamentalists who will, if they can, eliminate some of our sciences. And there are certain groups of our fellow citizens who object to the teaching of such ribald subjects as physiology and hygiene.

But why prolong the list? Only one other outside group of organizations that are exerting a tremendous influence on American education, medical as well as other, needs to be mentioned. I refer to the various Carnegie and similar boards, the Foundation for the Advancement of Teaching, the General Education Board, and so forth. Of much of the work done by these fine organizations no praise can be too great. Perhaps all that they have done in their investigation of various divisions of education is to be commended in that their efforts have produced improvements. I have in mind, as examples, the investigation of medical education some fifteen or twenty years ago under the auspices, I think, of the Carnegie Foundation for the Advancement of Teaching, and the investigation recently concluded, I believe, into dental education in America. One may fully admit the value of these investigations and the importance of their results, and yet have some doubt about the wisdom of permitting our system of public education to be greatly influenced by them.

Now it seems very clear that a unified program of work can hardly be expected from such a multitude of agencies working more or less independently. Each may contribute, undoubtedly in the past has contributed, elements of great value to the medical curriculum. But the suggestions have not been coordinated, the program has not been unified and not only the choice of subjects, but the emphasis upon them has been sometimes determined by the personal views of the more aggressive individuals in the various organizations. In other words, there are too many isolated agencies passing judgment and the judgments are too often partial.

Moreover, changes have been made too hard to bring about. When a decision has once been reached by a powerful organization and the fiat has gone forth that this decision must be respected by medical schools a change can not be easily made even though the decision may be unwise. A single institution certainly can not

depart from the requirement without getting into trouble with the standardizing associations. Moreover, the faculties are under pressure from their alumni and students.

To put the matter in another way, the curriculum has been made up more largely under the influence of those of us who have special interests in the matter than from the point of view of making a unified, well integrated whole course of study. The curriculum should be determined more largely than it has been by what I call the internal influences operating on it; that is, by the nature of the subjects, their relative importance, their scientific and educational character, whether laboratory or didactic, the degree of specialization desirable in each, the status of the sciences and technical arts and of professional education.

The faculties themselves can not be left to make up the curriculum with any more assurance of success than can the members of the various associations mentioned. Indeed, much of the good that is in the curriculum today is there because of the insistence of the associations against the views of faculties. Faculty inertia is a constant menace to progress. Moreover, individual ambition and aggressiveness differ among members of faculties. The man in charge of a subject, the head of a department, who is aggressive, pushing, ambitious, is likely to secure for his subject more than its due share of time. Moreover, as President Butler has pointed out, there has been too much departmental independence and isolation in our medical schools and too little coordination and faculty cooperation. One of our first tasks, as he points out, must be "to lessen the rigidity of the departmental system, which is the relic of an outgrown sharpness of division between subjects that are closely interrelated."

We need all the influences that have been mentioned to shape up a satisfactory medical curriculum. But we need them in consultation, working from the point of view of the needs of students and the profession rather than from the point of view of the experience or interest of individuals. Can we secure the cooperation of the various agencies to bring this about?

It is desirable that there should be a standard of medical education. That standard should be the result of a consensus of opinion of all the agencies that have a proper interest in the sub-

ject. The standard should be uniform, if possible, throughout the country. But it should be a standard set by the voluntary action of all those whose interests are involved and not by some agency outside of them that undertakes to impose a standard upon them. I wonder if benefit would not come from frequent conferences at which the State Boards, the American Medical Association, various state medical associations, and the Association of American Medical Colleges, should get together and try to work out an organization, which would be national in its scope, to secure the voluntary adherence of the various state boards and educational institutions to a curriculum standardized, indeed, but so flexible that it can be modified every few years without serious detriment, financial or other, to the educational institutions involved. To be sure there is a national board which does something of this kind. But, as I understand it, this board is not the creature of the various agencies that I have mentioned.

The standards of various states for qualification to practice should be as nearly as conditions permit the same. The standard curriculum of the colleges of medicine should have in view these standards as a minimum. The examination standards and the main features of the standard medical curriculum, if once determined by such conferences, should be subject to reconsideration and possible revision at least every five years. All agencies which can contribute to the subject should have an opportunity to do so before conclusions are reached as to what are proper standards and a proper curriculum. The curriculum should be approached from the point of view not of the special interests of individual practitioners or teachers, but rather from the point of view of what constitutes the main body of information necessary for the physician in his ordinary practice and the best pedagogical methods for teaching those subjects. The latter is a question largely for the professional educator.

The medical curriculum should aim primarily at turning out doctors; that is to say, men who are to practice medicine. It should provide at the same time, it seems to me, opportunities for those who may want to become research men. But these opportunities should be offshoots of, or additions to, the ordinary curriculum and not part of it.

Speaking as a layman, it seems to me that the tendency is too strong to prolong the length of medical schooling. The undergraduate curriculum should be reduced to the minimum necessary to give adequate information and training in those subjects necessary to general practice. Specialists should go beyond this a year or two, or whatever may be necessary. Would-be research men should go beyond it also in their particular directions for a longer or shorter time, according to the character of the work for which they wish to prepare.

As to educational technique as distinct from substance, I think our young doctors need to be taught how to coordinate what they learn and how to apply it as a whole. A knowledge of anatomy *plus* physiology *plus* physiological chemistry *plus* other subjects, does not make a skillful practitioner. He must be able to coordinate the knowledge he has in these various fields and apply it to the particular problem his patient presents. This part of the training he must get not from his books but from contact with the bedside patient and personal contact with skillful teachers performing the duties of their calling. This process is sometimes described as putting the clinical work farther down in the curriculum. I think it is less important to determine whether this clinical work shall reach down into the present pre-clinical years than it is to give more abundant opportunity to do this kind of work than students now have and more contact with the personality of their teachers.

Finally, in the pursuit of scientific and technical knowledge we are likely to forget the human element. In no profession is the human element of more importance. The doctor should command the respect and affection of his patients. Unless he is a man of sterling worth and a gentleman he can not do this. There is a tradition in army circles expressed in the phrase "an officer and a gentleman." The same idea, it seems to me, belongs to the medical profession—a doctor and a gentleman. The two go together. The doctor must have a wide knowledge of human nature, a good sense of humor, an appreciation of the good and bad qualities of his fellow men and a kindly tolerance that the rest of us seldom need, at any rate to so great an extent.

It has seemed to me that graduates have of late years shown more knowledge of facts about

disease in general than ability to apply those facts. There seems to me to be too wide a separation between the fundamental sciences and their application or, if you like, between the clinical and the non-clinical subjects. I do not believe that the fundamental sciences can be learned satisfactorily through the study of their application. But they can not be learned satisfactorily for medical purposes *without* study of their application. While there is danger of getting merely abstract knowledge by study apart from application, there is, on the other hand, a danger of getting merely empirical knowledge from a study of the subjects through application.

Still again, it seems to me that a larger part of the student's time in his fourth year might well be spent in hospitals in the study of general medicine and surgery. In the matter of diagnosis, I have gotten the impression, as I have watched some students and graduates, that they regard it as a mere matter of scientific manipulation of separate facts. They have omitted the human element and they have not coordinated the scientific phenomena. They have seemed to me at times, in the words of Dean Hamann of Western Reserve, to forget that "the patient is not merely material—he is a human being, with a disease—plus all his other mental, social, and environmental troubles, and possibilities and problems for the future—in need of help." Finally, speaking still as a layman, it has seemed to me that we are trying to teach too many details to our undergraduates.

The perfect curriculum producing the perfect doctor, according to the perfect standards, adopted by the perfect organizations, does not exist. We shall not approach any more closely to it unless we first coordinate the agencies that make the curriculum that trains the doctor. We of the University of Illinois have lately revised our curriculum and a large number of you, certainly more than two hundred, have kindly obliged us by making comments upon what we have done. I can not feel that we have made very much progress, certainly not as much as we would like to make, and that largely because of the restrictions imposed by some standardizing agencies. May we not look forward with some hope to an early conference of these various agencies, professional and educational, which, after proper review of the existing situation, will try to produce a well coordinated and unified cur-

riculum of medical study to train the general practitioner, with separate gardens of instruction, if you like, to which those who wish to become specialists and research men may go for further training without jeopardizing the success of the general program? For it is the production of the larger numbers of men trained to what we call general practice as it is now that there seems to be a call for. In any case associations like yours at meetings like this might well afford a day or half a day for conference with educational specialists in addition to the splendid programs of which yours for this meeting is so fine a type.

FACTORS IN THE REDUCTION OF TYPHOID FEVER IN CHICAGO*

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CHICAGO

Medical scientists have won many victories in their battles against disease. That against typhoid fever stands out as one of the greatest.

The credit for this great victory belongs to those scientists who discovered the cause of typhoid fever and the means by which the infection was transmitted. These scientists were either physicians or men and women closely allied to them. Therefore, we medical men take great pride in the victory achieved over a disease that sickened its hundreds of thousands and slew its tens of thousands.

A new group of scientists has recently sprung into being, known as sanitary engineers. Available for the use of this group was all of the knowledge on disease, health and sanitation accumulated by our profession for hundreds of years. It was medical men who laid the foundation upon which their work is now based.

The object of this paper is to call to your attention some of the milestones which have been erected by these pioneer research men who labored under great difficulties, and to discuss those factors which have made it possible for Chicago to have the lowest typhoid morbidity and mortality rate of any large city in the world.

The first milestone was erected by Dr. Eberth, when he discovered the etiological factor in typhoid fever (*Bacillus* of Eberth). The work from that time on was comparatively easy. It

was obvious that bacteria emitted from the human bowel could gain easy access into springs, wells and lakes. When the water supply of a home or community was contaminated with human excreta it was easy to understand how milk and foodstuffs readily became infected. Engineers and contractors were then consulted as to the mechanical ways and means of preventing these wells and lakes from whence drinking water was obtained from being contaminated. This was the beginning of the profession of sanitary engineering.

Following the discovery of the *Bacillus typhosis* an efficient vaccine was elaborated, by which typhoid could be prevented through immunization of the uninfected. This immunizing agent has done all that could be desired in military and other camps where large groups were domiciled. Unfortunately the civilian population has not used it to any great extent. Most health officers enforce its use for the uninfected who have been in contact with a case of typhoid fever.

Pasteur, the great French chemist, evolved a method for treating milk by heat. To Pasteur is due the credit of erecting the second great milestone in the battle against typhoid fever.

Other scientists developed the proof that typhoid fever was carried on the feet and the wings of the fly, and thus another milestone was erected.

In 1910 Major Darnell, of the Medical Corps of the United States Army, demonstrated that chlorine, in the form of liquified gas, could be utilized to destroy pathogenic bacteria in water, and thus render safe for drinking purposes a water which otherwise would be unsafe. The commercial firm of Wallace & Tiernan perfected apparatus for its safe and economical introduction into the water, and thus the fourth great milestone in the battle against typhoid fever was placed.

Then came Imhoff and a large group of research workers and inventors, with sewage reduction plants and activated sludge tanks for the disposal of human sewage.

With the knowledge that Eberth's *Bacillus* was the direct cause of typhoid fever—with the knowledge that it was transmitted largely through milk and water—with the knowledge that Pasteur's method of treating milk destroyed the *Bacillus* of typhoid—with the knowledge

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that the house fly carried the typhoid bacilli upon its feet and wings—with the knowledge that liquid chlorine introduced into water destroyed the typhoid bacillus, the important milestones had been erected for the complete overthrow of this disease.

These research workers laid the results of their labors at the feet of kings, presidents and governors. It required seven or eight decades and the loss of tens of thousands more lives before the civic conscience of rulers and citizens could be aroused to the point where appropriations of money were made by them to apply the scientific knowledge for the prevention of typhoid fever.

A few statesmen saw the light early and demanded that the necessary funds should be provided to meet the conditions prescribed by the research workers. Lord Palmerston, Prime Minister of England in 1865, made the significant statement: "For everyone that died from typhoid fever, some one should be hanged."

In matters pertaining to health and sanitation the rule is about as follows: The medical scientific research worker makes the discovery and publishes the results of his investigation; other scientific workers in the same field review his work; if they stamp it with their approval then the general practitioner and health officer begins to interest the general public. This usually requires years of effort, as is evidenced by our experience in vaccination for immunization against smallpox, typhoid fever and diphtheria. During the time I was Commissioner of Health I received a letter from Sir Wm. Osler congratulating us on the progress we had made against tuberculosis and typhoid fever, but stated: "Diphtheria still baffles us." Why? Because it is difficult to sell toxin anti-toxin to the public.

The education of the public as to sanitary needs is a long, slow process, and great judgment on the part of the sanitarians should be exercised in their requests for public funds. Every dollar should be carefully spent so as to return dividends in lowered death rate and greater safety to the community. Misrepresentation of the facts as to conditions and monetary needs is reprehensible and will in the end delay needed sanitary measures. A notable instance of this is found in the Sanitary District of Chicago, which includes all of Chicago and most of Cook County. Many millions of dollars

have been expended for the disposal of the sewage from this great metropolitan district. Claims have been made by the trustees and employees of this District which many believe are gross exaggerations of the facts. They believe this District has spent millions of dollars of the taxpayers' money, for which the people have received no sanitary benefit. Columns and columns of propaganda have been broadcasted through the public press to back up these alleged extravagant claims and demands of the officials now in charge of this Sanitary District.

It is therefore essential that our profession and the health officers throughout this state should study this problem carefully so as to be in position to give proper advice and council to their legislators and to the public generally.

In studying this subject we should keep uppermost in our minds those facts that experience has taught us. As surgeons we strive for aseptic surgery, but our experience proves to us daily that antiseptic and germicides are necessary to accomplish it. We cannot cut through the human skin without the use of iodine or some other germicidal agent. As health officers we have learned by bitter experience that milk practically free from pathogenic bacteria is impossible of attainment. Therefore, we have been compelled to resort to pasteurized or certified milk. As sanitary engineers we have had to resort to liquid chlorine treatment of water, after our experience taught us that water for large communities, free from pathogenic bacteria, was impossible of attainment, even under the most ideal conditions.

A study of the conditions in Chicago prior to the utilization of the scientific facts evolved by Eberth, Pasteur, Darnell and others, compared with the conditions after the utilization of these facts I believe are worthy of study.

The task of selling these truths to a community and having them adopted is, in my opinion, comparable to the task of discovering them in the first instance.

In 1891 Chicago had a population of approximately 1,150,000. In that year there were over 20,000 cases of known typhoid fever in Chicago. There were over 1,985 deaths; to be exact there were 173.8 deaths out of each 100,000 of population. The record shows that in this year there was more typhoid fever than in any other year during its history. The World's Fair had been

announced to take place in 1893. Newspapers in America, especially those in the east, wrote many uncomplimentary articles in regard to Chicago's sanitary condition. The mayor and aldermen were irritated and stimulated by this condition, and the cry went up: "Chicago must be cleaned up so as to be in a proper condition to welcome our visitors."

The Sanitary District law had been passed by the General Assembly in 1889, and the first Sanitary Board was at work making plans for the digging of the Drainage Canal. The citizens of Chicago were told that the Drainage Canal would not be completed and the flow of the Chicago River reversed for nearly a decade; (the main channel of the Drainage Canal was not in operation until February 1900, and the South Side intercepting sewer not until 1906, and the north side intercepting sewer until 1908).

There was much, however, that could be done which was not dependent upon the diversion of the sewage. A sanitary survey of the city at that time showed over 100,000 horses stabled in barns fronting on every alley throughout the entire city; it showed piles of manure stacked outside these barns, in which billions of flies were annually hatched; it showed tens of thousands of privy vaults, thousands of them filled to capacity—that must be cleaned and made as safe as such vaults could be made; it showed tens of thousands of homes without screens where the fly could go from manure to privy vault and from privy vault to the food in the homes; it showed hundreds of thousands of quarts of milk sold from unsanitary containers from uninspected milk dairies, and from dairy farms where oftentimes typhoid fever was present; it showed the case of typhoid fever sick in the home, with soiled linen from the beds frequently hung upon the clothes line in the back yard, where the flies gathered and from thence flitted back into the home again to infect other members of that or some neighbor's family; it showed a complete lack of quarantining and sanitary control of the typhoid fever patient and his environment; it showed shore intakes located only a few hundred feet from the shore at Chicago Ave. and Hyde Park pumping stations. The sewage flowed out to and easily mixed with the water that was pumped into the wells for human consumption. It showed that year that the stools from 20,000 typhoid fever patients were emptied either into

the toilet in the homes that were connected with the sewage system or were emptied into privy vaults, where the fly came into direct contact with them and carried typhoid infection throughout the community. In this manner infection was spread from case to case and from home to home, until typhoid infection was spread throughout the city. What more favorable conditions could anyone imagine for the spread of typhoid fever infection?

In 1891 officials and citizens were stimulated by the lash of criticism and began their sanitary clean-up campaign for the World's Fair. They succeeded so well in this that the year of the World's Fair, 1893, showed a reduction in deaths from typhoid fever from 173.8 to 53.5 per 100,000 of population. Following the World's Fair Chicago continued her clean-up campaign, so that by the end of the year 1899 she had further reduced the typhoid death rate to 27.2 per 100,000 of population.

Chicago had made all this great reduction prior to the reversal of the flow of the Chicago River, which did not occur until January, 1900. She had made this great improvement by extending the water intake tunnels farther out into the lake, by abandoning the shore intake water supply, by establishing a municipal laboratory, by establishing a milk inspection division, by regulating the production and sale of ice, and by improving sanitary conditions generally.

During the period 1891-1899 Doctors Reynolds and Ware, and Mr. Kerr had charge of the Department of Health. Connected with the Health Department during that period were such able physicians and sanitarians as Frank W. Reilly, Herman H. Spalding, and Isaac D. Rawlings. The percentage reduction of this disease from 1891, when there were 173.8 deaths per 100,000 population, to 1899, when there were but 27.2, was 84. All of this reduction was accomplished without the aid of the Sanitary District, because none of Chicago's sewage was diverted from the lake until the reversal of the flow of the Chicago River, which occurred January 17, 1900. The mortality rate of 27.2 per 100,000 of population was never again exceeded except in the year 1901, when it rose to 29.1, and the year 1902, when it reached 44.5, and the year 1903, when it was 31.8 per 100,000 of population. While the Health Department reports do not show the exact cause of the increase

of typhoid fever during this three-year period, from private sources I have reliable evidence that it was due to contamination with sewage of the water supplying the West Side of Chicago, through the agency of broken sewer pipes which permitted the sewage to flow directly into the water supply wells. This increase occurred after the flow of the sewage into the lake by way of the Chicago River had been stopped by the reversal of the flow of this river.

At the close of the year 1917 all of the water supply of Chicago was obtained through tunnels with their intakes at cribs located from two to four miles from the shore. The condition at that time showed that the water procured through shore intakes had been abandoned; that the water was treated at the pumping stations with liquid chlorine which was introduced into the water by scientific apparatus, so constructed that the amount of chlorine introduced was carefully weighed to provide the proper amount for each million gallons of water pumped; it showed a daily bacterial count of water collected at crib intakes, also a daily bacterial count of water taken from the faucet in the homes in various locations, so that the purity of the water from each pumping station was constantly known to the health officers; it showed that 98% of the milk supply of the City of Chicago was pasteurized, and the other 2% was certified milk, supervised by the Milk Commission of the Chicago Medical Society; it showed that the automobile had eliminated most of the horses from the City of Chicago; that no manure was permitted to be stored in the alleys; that an ordinance had been passed in 1917 requiring residences, stables and barns to be screened against flies; that an ordinance had been passed in 1915, requiring foods sold in groceries and restaurants be protected by glass covering; it showed that a majority of typhoid fever cases were hospitalized, and placed in charge of a trained nurse who was not permitted to nurse any other patient while caring for the typhoid case; it showed that those that were permitted to remain at home were in charge of a trained nurse and carefully quarantined; that all milk bottles delivered to the premises were kept until the termination of the case and were then sterilized under the supervision of a health inspector before they were permitted to go back to the milk dealer; it showed that members of the patient family were

given immunizing doses of typhoid vaccine. In fact, it showed that no case of typhoid fever was permitted to be nursed at home unless the conditions were ideal for good care and quarantine; it showed that the physicians and nurses of the Chicago hospitals were advised to be immunized against typhoid fever; that the hospitals of Chicago were for the most part following this advice; it showed that the stool from typhoid fever patients, both in the home and the hospitals was required to be sterilized in the bed pan before it was emptied into the sewer; it showed typhoid fever cases were terminated only after three examinations of the feces and urine, and that all chronic typhoid carriers were tabulated, with health officers calling upon them from time to time to make sure that they were not occupied in handling foodstuffs. What more ideal conditions for the prevention of typhoid fever infection and transmission can you obtain?

Campaigns were conducted from time to time to have people going on vacation immunized against typhoid fever, and those that would not do this were requested to carry with them chlorine tablets to put in the drinking water of the vacationists while they were away from Chicago.

All of this resulted in reducing the number of typhoid deaths in the City of Chicago to the lowest of any large city in America, and gave us a death rate of but 1.1 per 100,000 of population.

When the typhoid fever vaccine was first produced it was freely predicted that we would be able to conquer typhoid in our City through its use. Experiment showed that this vaccine, like that for diphtheria, toxin anti-toxin, was difficult to sell to the people. Sanitarians, with their pasteurization, their chlorination, their food coverings, their screenings, their elimination of toilets from backyards, the elimination of horses by the automobile, altogether did what it was hoped the typhoid immunizing agent would do. It is now still more difficult to get the citizens of a great city to permit themselves to be immunized with the typhoid vaccine, and with our present sanitary conditions in the City of Chicago no one is now urging it very strongly, except in hospitals where the staff comes in contact with an occasional case of typhoid fever and in home contacts.

A careful study of the morbidity and mortal-

ity statistics of the City of Chicago will prove to any fair-minded person that the application of these known scientific methods has been the determining factor in reduction of typhoid fever in the City of Chicago, and I believe this fact holds true in every city in the world.

A careful study of the chart presented herewith shows that the clean-up campaign following the great epidemic here in 1891 brought a remarkable and almost immediate results, for while the death rate in 1891 was 173.8 per 100,000 of population, it had been reduced in 1893 to 53.5, and in 1899 to but 27.2. This was done notwithstanding the fact that the Chicago River was still running into the lake at this time, and that the crosstown sewers on the north and south sides were emptied directly into the lake.

The records of the Health Department of Chicago show very plainly where typhoid fever had increased in any particular year the cause was apparent. Most of these instances can be tabulated from the records. Pointing out a few will be sufficient to illustrate the point, such as the epidemic of 1902, two years after the Chicago River had been reversed, which was due to pollution of the water supply wells at the *pumping stations*. In 1908 there were two local outbreaks of typhoid fever traced to milk supply, and in 1911 there were 71 cases in Englewood traced to the milk supply. In 1913 there were three food-borne outbreaks of typhoid, two of which were traced to milk supply, the other to a carrier in a downtown restaurant. In 1914 there were 68 cases of typhoid, traced to milk pollution. It was not until 1915 that the water supply of Chicago was treated with liquid chlorine. The first station where the water was treated with liquid chlorine was the Chicago Avenue station, and this treatment began on September 16 of that year. Liquid chlorine application was completed for the 22nd Street pumping station on December 15 of the same year. There were two small food borne outbreaks of typhoid, one from milk and the other from a cook typhoid carrier in the fall of the same year. On January 26, 1916, there was a local outbreak of typhoid in the 68th Street water supply district, which was due to discharge of sewage into the pumping wells as a direct result of the backing up and overflowing of the South Side intercepting sewer, operated by the Sanitary District. This occurred during

a heavy rainfall. The sewage ran directly into the water supply wells of this station. This resulted in 105 cases of typhoid fever and 8 deaths. It was this same year that I issued an executive order requiring all milk and cream, except certified milk, to be pasteurized. This order also raised the pasteurization temperature to 145 degrees Fahrenheit and required that it should be held at that temperature for 30 minutes, instead of 20 minutes. When this order was issued but 65% of the milk supply of Chicago was being pasteurized under a milk ordinance written by Dr. Wm. A. Evans and passed by the City Council in 1908.

Dr. Evans deserves the credit for being the pioneer battler for pasteurizing milk in Chicago. While this executive order was put out as an emergency provision January 26, 1916, it was never rescinded. Chicago at the present time is requiring all milk and cream, with the exception of certified milk, to be pasteurized under this order. The present ordinance of the City of Chicago permits milk that scores 65% on United States Public Health Service score card to be sold in Chicago without pasteurization. The executive order forced all milk to be pasteurized. Since this order was promulgated there have been no milk borne epidemics of typhoid fever in the City of Chicago. During the last eight years the milk dealers have obeyed this order. They know that it is poor business to sell any but pasteurized milk.

The Health Department of Chicago, through pasteurization of milk which began in 1908, through the application of liquid chlorine to the water which began in 1915, and through the adoption of all known scientific methods, has removed the milk and food borne epidemics of typhoid fever from the City of Chicago.

In South Chicago in the Calumet district, during the seven years that I was Commissioner of Health, the sewage from over 300,000 people was emptied directly into Lake Michigan. The channel connecting the Calumet Lake region with the Drainage Canal has since been completed, but it has not served to drain the sewage from the lake all the time. Last year the sewage flowed into Lake Michigan following each heavy rainfall. Notwithstanding this fact there have been no cases of typhoid fever traced to this water from Lake Michigan.

This seven-year demonstration ought to con-

vince the most skeptical that the water from the Hyde Park and Edward F. Dunne cribs can be rendered safe by the application of liquid chlorine, notwithstanding the fact that these cribs are located about two miles from the place where the sewage empties into the lake.

Chicago has approximately 300 cases of typhoid fever each year and about 30 deaths. 300 cases of typhoid fever spread throughout the twelve months of the year would give an average of about 30 or 40 cases sick at any given time. In the fall and winter months this would probably range from 50 to 60 cases sick at one time.

A strict enforcement of the Health Department rules in regard to emptying the bed pans containing stools from the patients into the sewer, until the typhoid bacteria had been destroyed by chemical disinfectants, would make it impossible for the dejecta from typhoid patients to be emptied into our sewage. Admitting that it is not possible to have 100% compliance with this order, and admitting that 20 or 25 chronic typhoid carriers in the City of Chicago do not sterilize their feces and urine, this would leave probably 30 or 35 individuals in the City of Chicago emptying typhoid fever dejecta containing live bacteria into the sewers daily, which would mean the feces and urine from one person out of each 100,000 of population contained typhoid bacilli in their dejecta. If all of the feces and urine from this small number of typhoid fever patients should perchance reach Lake Michigan through the devious street sewers and then be distributed by the winds and waves, how many live typhoid bacteria do you suppose would finally get into our intake cribs which are located from 2 to 4 miles from the shore? How many of those that did get into the tunnels through these cribs would be able to run the gauntlet of the liquid chlorine in the pumping station and finally reach the faucets in our homes alive? I am not advocating that this be permitted, although the South Chicago and Calumet district sewage did flow into Lake Michigan during the seven years that I was Health Commissioner. This condition did not prevent us from lowering the typhoid death rate from 6.9 deaths per 100,000 in 1914, to 1.6 in 1917. When we attained the lowest death rate of any large city of the world and lowering it still further in 1918-19-20-21 to 1.1 per 100,000 of population.

Ridiculous statements have been broadcast in regard to the dangers of a typhoid epidemic in Chicago unless Chicago yields at once to the demands of the Sanitary District trustees.

Chicago, with its present sanitary knowledge and its Health Department laboratories and trained health officers, is in no danger from any typhoid epidemic regardless of the amount of water the United States permits us to withdraw from Lake Michigan. At the present time it is desirable that Chicago should have at least 8,500 cubic feet of water per second in order that our present load of sewage should be sufficiently diluted and carried down the Chicago River, in order to prevent odors arising from the Chicago River. This would be a nuisance which we do not want and will not have if we can prevent it, but this would not mean that this odor would produce any typhoid fever or that Chicago is incapable of protecting its water, milk and food supplies from typhoid fever contamination. What Chicago needs worse than anything else is filtration plants for each pumping station. With such filtration plants the larger particles would be removed from the water. We could then remove at least two-thirds of the chlorine that we are now applying to our water, and thus give a more palatable water supply to our citizens.

The diversion of Chicago's sewage from Lake Michigan by reversing the flow of the Chicago River, the digging of the north and south side intercepting sewers, and the north shore channel, has diverted most of the sewage from the region from Lake Michigan, but this was not the big element, as I have shown you, for the reduction of typhoid fever morbidity and mortality in the City of Chicago.

The Sanitary District trustees in all of their publications on all of their charts use the mortality rate of 1891 of 173.8 deaths per 100,000 of population to show the public what they may expect if they do not get what they demand. I have shown you that the Chicago rate had been reduced to 27.2 for 100,000 before they began to divert the sewage. I have further shown you that the application of heat to our milk as prescribed by Pasteur, and of liquid chlorine to our water supply, together with other scientific procedures were the big factors of lowering the rate from 27.2 in 1899 to 1.1 in 1921, and for these the Sanitary District can take no credit.

The amount of money expended by the Health

Departments during the thirty-one years from 1891 was approximately \$20,000,000, and that spent by the Sanitary District is approximately \$130,000,000.

In order to obtain a true picture of the reduction of typhoid fever it is necessary to study the statistical data from year to year. No study of ten or five year periods gives you the true story.

Chicago must stop emptying its sewage into the Drainage Canal and sending it down into the Illinois River. Chicago must build its sewage reduction plants. Chicago must do this work as rapidly as possible. But Chicago should not be compelled to pay six or seven times what it should cost for this work, and Chicago should not be held up with a gun at its head, with the threat: "If you don't produce this extravagant amount of money at once, then you will pay for it with your lives," because this is not the truth. I bitterly resent taking from Eberth and Pasteur, from Darnell, from Evans, from Reilly, from Koehler, from Spalding, from Rawlings, from the laboratory and health inspectors of the Department of Health, the credit for reduction of typhoid fever in Chicago. The facts show the credit for the elimination of 95% of the typhoid fever in the City of Chicago since 1891 is due to the men who have, through their scientific methods and through the work of the employees of the Health Department, eliminated most of the typhoid fever from Chicago. If the Chicago Health Department ceased to function and nothing was done to prevent typhoid fever in Chicago, except to divert the sewage from the Lake, then Chicago would again revert to a rate of at least as high as that of 1899, before the Chicago River had been diverted. Let Chicago stop the pasteurization of milk, the chlorination of water, the protection of her food supply, the quarantining of her known cases of typhoid, the regulation of hospitals, and the various sanitary inspecting services, and the public would soon learn the truth of the above statement.

I have hesitated and thought whether or not it was wise to write this paper and tell the plain facts, because I know full well that I will be misquoted, that a part of this article will be published to discredit my statements, which are based on the facts. So to those who may attempt to do this I want to say again, I am in favor of sewage reduction plants and a complete diversion of all of our sewers from the Mis-

issippi Valley. I am in favor of building these plants quickly, economically, and having them of the latest scientific design.

DISCUSSION

Dr. I. D. Rawlings, Springfield: As Dr. Robertson has told you, I was in the Chicago Health Department at the time the canal was opened in 1900, and we fully expected to see the typhoid rate drop. But you will note from the chart that we did not get the remarkable reduction we anticipated. It was opened in 1900, and yet we had an increase the following year. Of course all the sewerage was not diverted at that time, but in 1906 we diverted more, and expected a large drop, but did not get it. Again in 1908, when the other branch was opened, we did not get any great reduction. I think all the measures Dr. Robertson outlined had a good deal to do with reducing the rate. From 1912 to 1916 the rate was about 5 per 100,000 and I made the prophecy that we had the rate as low as it ever would go, but when Dr. Robertson put on a more strict pasteurization regime, and made the milk safe and chlorinated the water supply, we find, as you will note from the chart, that the rate dropped, and dropped, very markedly in 1916 and 1917, and the average deaths after that were a trifle over 1 per 100,000. So I think other factors had much to do with reducing the typhoid in Chicago besides the digging of the canal, which it took a decade to complete.

Dr. R. V. Brokaw, Springfield: I have enjoyed Doctor Robertson's paper very much. Sometimes I think we are inclined to take credit for results we do not deserve; and at other times we do not get credit for results we really have obtained. The reduction of tuberculosis mortality, for example, can hardly be attributed to any single agency or to any single factor. In like manner, I think Doctor Robertson is quite correct in his statement that many factors have contributed to the reduction of typhoid in Chicago. After thorough chlorination of the water supply, general pasteurization of the milk supply, and careful isolation of clinical cases, we shall still be confronted with a residual incidence of typhoid due to carriers. It is in the discovery and proper supervision of these typhoid carriers that we shall win our ultimate victory in the elimination of this disease.

Dr. A. A. Crooks, Peoria: Those of you who are not privileged to live in the valley of the Illinois can hardly understand the amount of courage that it must have taken for Dr. Robertson to write this paper just at this critical time, when the demand is very strong for ten thousand cubic feet flow of lake water per second. Those who live in the valley and those who live in Peoria and in other towns that dot the Illinois River, which is merely a continuation of the drainage canal from Chicago, are quite in the majority in not endorsing any such great flow of water, ruining many of our industries, our farms and the valuable land along the river. I personally want to thank Dr. Robertson, as one of the inhabitants of the valley, for this very decided stand. I believe this propaganda, if it were broadcast, which I hope it will be, would

do us a great deal of good. We do not feel, in our valley, that we should stand, or permit, the sewage disposal of Chicago to come our way. In that connection I want to admit that it is true, we of Peoria cannot call the kettle black. We are doing our part in contaminating the stream. I believe that out of this, sewage reduction plants are bound to come about, and I am quite sure that Dr. Robertson will have the gratitude of all the people in the valley.

Mr. Harry Ferguson, Illinois Chief Sanitary Engineer, Springfield: Professor Sedgwick, a pioneer in the application of the science of biology, bacteriology, chemistry and engineering to public health problems, in quoting the statement quoted by Dr. Robertson that for every case of typhoid fever somebody should be hung, used to add that perhaps for every case of typhoid fever somebody should be educated. That would accomplish the same purpose and be more humane. Education is some times unfortunately painfully slow. This year in Illinois we had two water-borne epidemics, the first for a long time. It is discouraging to have such epidemics occur. In each case the State Department of Public Health had warned the city and waterworks officials that the water supplies were subject to contamination and had repeated such advice and warnings. We had carried on education as far as we could but the lesson was not learned until the epidemic had occurred and needless suffering, illness and death had resulted. In cities like Chicago and Rockford where they are able to add to their educational work public health police powers they have made much more progress than has been possible in other portions of the State where authority is lacking to carry on and supplement the educational methods. In this respect Illinois is behind many States as far as water-supply and sewage-disposal problems are concerned and it is hoped that some day it will be possible to exercise authority in those places where they will not learn the lesson until a catastrophe such as a water-borne epidemic has occurred.

Dr. H. W. Smith, Roodhouse: I have lived in Green County for 31 years, and we have quit having typhoid fever there, where formerly I have had as many as forty cases in a year in the rural districts. It has been no light task to train the country people to take ordinary precautions. The farmer cannot understand why care should be taken about the water supply. I have lectured and talked a good deal to these farmers in my county about their drainage and the necessity for keeping water clean. I have not had a case such as I used to have for over three years—I mean where the typhoid would gradually go through the whole family, sometimes taking all winter. We had a great number of these cases in former years. I want to heartily concur with the doctor from Peoria who speaks about the drainage down the Illinois River. I know one man who put a lot of money, his life's savings, into some land there, and he has lost his money on account of this situation. I own property there myself, and it has deteriorated 50 per cent in value. Now I can make a living practicing medicine but there are other men who have their life-

time savings in their farms, and have lost them. What will come of it? The surface of the river is covered with dirty scummy oil, the beauty of the country is destroyed. I think it is up to the doctors and citizens to see that the people living in that valley are protected.

Dr. John Dill Robertson, Chicago (closing): I want to congratulate Dr. Smith from Roodhouse on his educational work among the people in his neighborhood. The results he has accomplished are certainly worthy of comment. I want to stress one thing, so that I won't be misunderstood. In 1899 the bill was passed for the drainage canal for Chicago. They made their plans and started to dig, and finished digging the main canal so that they could reverse the Chicago River in January, 1900. Now typhoid had been reduced 84% from what it was in 1891 before they diverted any sewage from the lake. This left 16% for us to quarrel over as to who should have the credit. Typhoid fever increased during the next three years. In 1907 Dr. Evans was appointed Commissioner of Health for Chicago. He introduced his pasteurized milk ordinance and started to get the milk supply pasteurized, and by 1913, 65% was pasteurized. In 1916 I, as Health Commissioner, forced the pasteurization of all the milk through an executive order. During 1915 and 1916 we placed in our pumping stations apparatus for chlorinating the water supply with liquid chlorine. The Drainage Board diverted the North Side sewage in 1908—the South Side sewage in 1906. I say in closing that if the U. S. Government permitted Chicago to use only 4200 cubic second feet the result would be only an increase in bad odor from the Chicago River, just as you have in Peoria at the present time. We would not have any typhoid, because it would be prevented by chlorination.

I hoped someone would point out some flaw in my argument, but as you have not, I want to thank you for the way you have discussed my paper. I hesitated before writing this paper. I know that someone is certainly going to jump on me heavy for telling you the truth.

DIAPHRAGMATIC HERNIA*

JOHN W. DREYER, B.S., M.D., F.A.C.S.
AURORA, ILLINOIS

The English literature on diaphragmatic hernia is very meager. The German clinicians, on the other hand, have been very thorough in the study of these conditions. Struppler in 1901 reported 500 cases gathered largely from necropsy records. Giffin in 1912 had succeeded in collecting 141 additional cases. He states that most of these were either congenital hernias of babes or symptomless ones collected at necropsy, and that but 15 cases were diagnosed during

*Read before Section on Surgery, Illinois State Medical Society, Quincy, May 19-21, 1925.

life. He further observes that whereas the symptoms and signs of diaphragmatic hernia may be quite clear, the diagnosis is missed on account of the physicians' unfamiliarity with them, and it is for this reason that I am presenting this paper.

Diaphragmatic hernia may be congenital or acquired. The congenital are usually found at the necropsy of a still born infant. They are usually on the left side and through the crus. This is because the left side is weaker on account of the openings for the esophagus, aorta and



Figure 1. Shows deformity of Pelvis.

vena cava and because the liver acts as a buffer on the right side (though knobs of the liver have been found extruded into a right sided hernia).

These congenital hernias usually contain the stomach, transverse colon, portions of the ileum and jejunum and occasionally the spleen. The lungs are collapsed and fail to expand. One such case came under my personal observation. An apparently normal babe born of healthy parents failed to breathe and autopsy showed a large opening in the left diaphragm, collapsed lungs and viscera in the pleural cavity.

Traumatic types of acquired hernias are more commonly observed and should be suspected after

any crushing injury to the lower thorax or upper abdomen, such as might occur in a sudden doubling up of the body; as in being caught in a sand slide; being caught between car buffers; a severe blow in the upper abdomen or lower thorax; a severe twist of the trunk or stab wounds involving the diaphragm.

Abbott believes that acquired hernias are much more common than is generally supposed. Their occurrence is probably dependent on increased abdominal tension, either acute or chronic. The stomach is the first viscus to enter the sac and for this reason, with the aid of fluoroscopy should be easy to diagnose. The cases reported, however, are usually large hernias, showing that the smaller ones escape observation, because they produce relatively few subjective symptoms while they are small. Furthermore, palpation, percussion and auscultation elicit only negative findings.

The symptomatology is usually that of epigastric distress, acidity, regurgitation and vomiting. Many complain of a feeling of fullness in the chest after a full meal, or when they retire. Vomiting usually alleviates the discomfort. Many are relieved by the ingestion of alkalis, but made worse by food—an important aid in differentiation from ulcer; likewise, analysis of gastric contents reveals a normal acidity. A severe strain or sudden exertion, or a hasty or copious meal may precipitate an attack of epigastric or thoracic pain.

Dyspnea is a prominent feature and is often associated with thoracic pain. Intestinal obstruction may be present—and frequently is the presenting symptom. Several cases of gastric perforation due to prolonged incarceration are reported.

Tympanitic percussion note, distant breath sounds, gurgling and tinkling sounds over the lower chest, with hyper-resonance or slight alteration over the upper, are the usual physical findings. The heart may be pushed to the right. The presence of the spleen in the sac may cause a dullness below the tympany on deep percussion. Filling the stomach with water will obliterate the tympany, and injecting air or water into the colon will likewise change the note if the colon is involved in the hernia.

Elevation or paralysis of the diaphragm may elicit many of the above findings and as this is

not a surgical problem it must be definitely ruled out.

Balfour has given three important diagnostic points:

"1. Destruction of the definite dome shape which is characteristic of the normal diaphragmatic shadow.

"2. The appearance of lung tissue shadow seen through the stomach gas bubble when formed in the chest.

"3. The demonstration of bismuth in the colon when found above the bow line of the diaphragm."

Abbott has evolved a special technique for demonstrating small hernias. The opaque meal given to the patient standing reveals nothing—but if the patient be made to lie on the back and then instructed to take a deep breath, hold it and strain, the stomach is forced into the sac, also the liver is pushed down, affording a better view of the lower esophageal region. "The patient is then turned to his right (sic) which brings the opaque solution into more intimate contact with the esophageal opening." The turning is continued till the patient lies on the abdomen. The deep breathing and straining being continued at intervals. The hernia shadow appears rounded above the diaphragm and may vary from the size of a hen's egg up to any dimension. The Germans put their patients in Trendelenburg position.

In operating on diaphragmatic hernia, approach may be made through either the abdomen or the chest. If through the abdomen then the incision is made over the center of the hernia as nearly as can be ascertained. Inasmuch as it is always difficult to keep the viscera from being sucked into the pleural cavity, and reduction thus rendered more difficult, some surgeons prefer an osteoplastic flap resection of the ribs, and Goodell of London combines both.

Case 1. Reported in body of paper—that of a still born infant.

Case 2. Mrs. R. N. aged 23—Bi-para—family history negative. Personal history of no import save that at age of nine she was caught under a falling pile of lumber and sustained severe injuries to trunk and head. She was in coma a number of days and her attending surgeon diagnosed fractured skull. She made an apparent perfect recovery and has always been well and very active, indulging in tennis, horse-back riding, hiking, etc.

Her first pregnancy terminated spontaneously at three months after a run of high fever and chills and

pain in the left renal area. This was probably a pyelitis as it recurred twice during the second pregnancy and subsided promptly after ureteral lavage.

She was first seen by me in the fourth month of her second pregnancy, and the physical examination brought nothing further to light except a deformed pelvis shown in plate 1. A Cesarian delivery was then determined upon. Pregnancy developed with out any disturbance save the attacks of pyelitis. April 28, 1924 she went into labor and was promptly laparotomized and delivered of a normal 6-pound girl. For five days everything progressed smoothly save for



Figure 2. Shows colon filled with Barium—note relative position to clavicle.

a good deal of tympany, occasional vomiting and eructations of gas. It was noted that her pulse was rapid, and she had rather shallow respirations, 24 to 28. She was extremely restless and nervous.

On the 8th day she had a slight chill, temperature rose to 101 and the white count rose to 20,400. Pain was rather pronounced in the right lower quadrant and not so acute on the left. The left lung showed a dullness posteriorly, but breath sounds were distant. The upper lung was hyper-resonant both anteriorly and posteriorly and just above the precordial area and to the left of the sternum an intestinal gurgle was very distinctly heard. The heart was pushed to the right. There was considerable dyspnea and some cough. A diagnosis of left lower lobar pneumonia with effusion was made.

There was a small area of dullness and some rales in the right middle lobe. The temperature continued for 5 days, dropped from 102 to normal and remained so, but the dyspnea became more marked. With the

dullness posterior as high as the 4th rib and the heart pushed to the right it was presumed the dyspnea was due to effusion and thoracentesis was attempted. Only a few drops of blood were obtained. The dyspnea increased, the patient became more restless and on the nineteenth day nausea and vomiting were incessant.

She was taken to the x-ray for further examination and plate No. 2 established her diagnosis. The dullness posteriorly undoubtedly was spleen.

The patient appeared too critical for any surgery and so was put back to bed. Her symptoms gradually subsided and June 5 she was dismissed from the hospital and continued to gain until she seemed perfectly well.

She gained weight and about six months later in an attempt to reduce, put on a rubber reducing girdle. After a few days she consulted me on account of

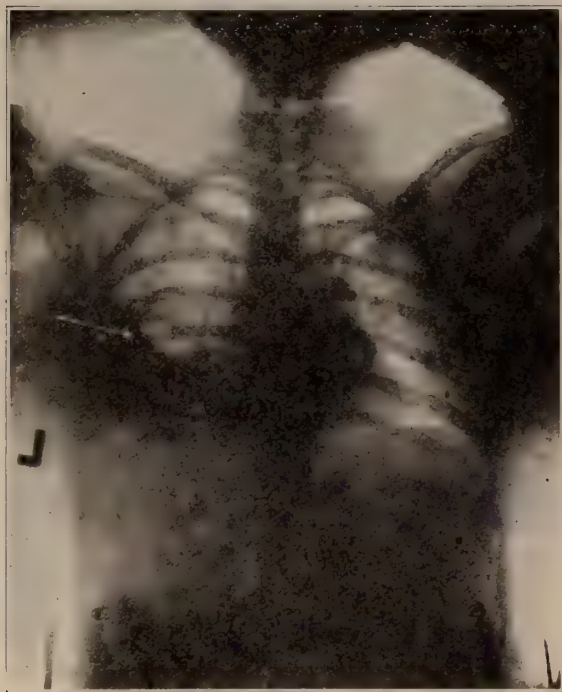


Figure 3. Arrow points to gas bubble above dome of diaphragm. Picture taken 1 year after preceding picture.

dyspnea and was advised to discontinue her girdle. Her distress was not so marked and one day several weeks later she felt a "snap" (as she termed it) in her left side and she was able to breathe as well as ever.

Summary:

Diaphragmatic hernias are undoubtedly quite common. The symptoms are vague and variable but fairly characteristic. Diaphragmatic elevation must be differentiated. Diagnosis cannot be made save by x-ray in conjunction with special technique.

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DISCUSSION

Dr. C. Matthews, Chicago: Dr. Dreyer has presented the subject from the surgeon's point of view with the necessary roentgenographic studies. I will present it from the roentgenologist's point of view, chiefly on differential diagnosis.

Diaphragmatic hernia we know as a protrusion of one or more abdominal viscera through the diaphragm. The cause may be trauma, strain or developmental anomaly. The patient will complain of substernal distress which may radiate to the shoulder or may not complain of pain at all. There will be occasional digestive disturbances, vomiting with excessive sputum. One of our patients had an attack of violent vomiting after childbirth. She died suddenly and autopsy showed a diaphragmatic hernia.

Eventration of the diaphragm differs from diaphragmatic hernia in that it is a protrusion of the viscera preceded by the diaphragm. In both eventration and diaphragmatic hernia we are told that the tissues can be displaced toward the unaffected side. This displacement tends to be greater on deep inspiration. One thing about diaphragmatic hernia is that the diaphragm shows poor detail at the spot where the hernia will later be protruded, while in eventration the diaphragm is complete. The eventration may be pathologic or developmental. If it is developmental the diaphragm will rise and fall as in inspiration. If it is pathologic there will be a diaphragmatic movement which will rise when we expect it to fall and will fall when we expect it to rise. It rises on expiration and falls on inspiration. They say that the only way by which we can determine whether the condition is an eventration or a hernia is by artificial pneumothorax. These cases I am presenting happen to be spontaneous pneumothorax from rupture of an air-containing viscus. Pneumothorax will permit the diaphragm to elevate and prove to us that the diaphragm is not perforated.

A high diaphragm on the right must be considered and that must be differentiated from several other things rather than eventration when it occurs on the right. The one thing that must be considered is subdiaphragmatic abscess. When it is high and does not move freely and there are symptoms referable to the chest, we must assume that there is a subdiaphragmatic abscess. Another thing that we must consider is enlargement of the liver. One of the conditions roentgenologists will have to study and which Dr. Carmen mentions is a short esophagus, pulling the stomach up through the esophageal orifice. You will find a bulging in the esophageal orifice and the stomach below. That is rather uncommon. We will have to

differentiate from anything which might give a barium residue after the passage of the meal. A small amount of residue in the lower esophagus might be differentiated from diaphragmatic hernia. I had a case where twice at year intervals I examined the man who had what appeared to be a diverticulum of the lower esophagus. He had had cardiospasm since 1923. He had 10 ounces residue at the end of six hours. In another case, the patient, a perfectly healthy woman, had repeated attacks of violent vomiting and nothing else. The diagnosis was hysterical vomiting. On roentgenological study it was found that she had an hour-glass stomach. This is one of the conditions that will have to be differentiated.

Dr. F. Brenner, Quincy: I have a case of this kind under observation at the present time, seen in consultation with Dr. W. H. Baker. The patient is a fireman, healthy and robust. He fell one floor landing on his stomach. There was marked dyspnea and the diagnosis seemed very simple because by placing my ear to the chest there was a great deal of rumbling to be heard on the left side clear up to the second rib. The x-ray showed a diaphragmatic hernia. He had high blood pressure. He gradually improved and was not operated on. On examination now practically nothing can be found. The chest seems clear on that side. I have not seen the last picture.

Dr. W. R. Cubbins, Chicago: I had one very startling case of this type, a man who was in an automobile wreck and was brought into the Cook County Hospital late one Saturday night. The point I wish to emphasize is that he had the clinical symptoms of an acute condition. He complained very definitely of pain beneath the sternum. He was very pale, extremely ill and had a high leucocyte count. We were not able to make any definite diagnosis of findings in the chest. There was a question of dullness but no signs of an abnormal type. We thought there might be a little harsh breathing. The one startling thing is that he complained of pain beneath his sternum. We did not have an x-ray picture made. The x-ray would have clinched the diagnosis. He complained very bitterly for five weeks. He then made some improvement. He had definite evidence of the stomach being in the thorax. In operating on these cases it is simpler to go through the chest rather than to try to pull the viscera down through the abdominal route.

Dr. John A. Wolfer, Chicago: I saw a case recently of a woman who three months before admission to the hospital had been delivered of a normal child. She complained of dyspeptic symptoms which her physician attributed to gall-bladder disease. She came into the hospital for diagnosis. Before anything could be done she was found dead on the floor of her room. At autopsy there was found a defect in the diaphragm as large as a fetal head. The heart was pushed well over to the right and the apex pointed anteriorly and to the right. The stomach, part of the liver,

transverse colon and ileum were in the thoracic cavity. She must have had this imperfection for a very long period of time and probably during delivery or some time afterwards the viscera were forced into the thoracic cavity.

Another case occurred in a colored woman who had received a crushing injury. She complained of substernal pain, such as Dr. Dreyer and Dr. Cubbins referred to. This case was diagnosed from the physical and x-ray findings. She succumbed on the operating table.

Dr. J. W. Dreyer, Aurora (closing the discussion): I am very much pleased with the x-ray demonstration that Dr. Matthews gave. I am very happy that she showed that eventration of the diaphragm is different from diaphragmatic hernia. Eventration of the diaphragm was a term invented by Kernig some twenty years ago and most of his colleagues objected to that term. It is a proper term in a way but there are so many different things that might be called eventration that the German writers have adopted the term "elevation of the diaphragm." Balfour and Giffin had two articles in the literature and both stated they preferred the term "elevation of the diaphragm."

I wonder if Dr. Matthews meant pneumoperitoneum rather than pneumothorax. She has pointed out the rise and fall of the diaphragm.

As I mentioned, we cannot make a positive diagnosis of small hernias or even of large hernias without the aid of the x-ray. I think Dr. Brenner and Dr. Cubbins emphasized the peculiar kind of injury that is a causative factor in these diaphragmatic hernias. This is a doubling up of the body. If there is a weakness there something has to give way. I imagine in the case Dr. Wolfer described that the increased abdominal tension the woman had during labor and the bearing down was the cause of the herniation of the abdominal contents into the thorax producing the acute attack.

As I stated in the paper, the patient was so critically ill that surgery was out of the question and we adopted the measure of putting her in an upright position. Just as soon as we did that the acute symptoms seemed to subside.

In the matter of obstruction there are several articles in the French literature and one by two English writers where the patients were brought to the hospital extremely ill of obstructive symptoms. In one case the chest was found full of stomach contents. In this case the stomach had been incarcerated in the chest and had perforated.

Dr. Wolfer mentioned the diagnosis of gall-bladder disease. Dr. Hare, in the *Therapeutic Gazette*, reported a case that he had diagnosed by the radiograph. This patient had been suffering for about three years and was diagnosed in one clinic as gall-bladder disease, in another as peptic ulcer. Both clinics had advised operation. Dr. Hare found the real condition but thought it was not sufficient to call for laparotomy.

THE RELATION OF WOMEN'S CLUBS TO ORGANIZED MEDICINE AND THE PUBLIC HEALTH MOVEMENT.*

LENA K. SADLER, M. D.
CHICAGO

In the furtherance of our efforts to popularize preventive medicine, there is probably no more important and influential group than the club women of Illinois. As a class they are well worth cultivating.

In the last two years I have had an opportunity to come in contact with club women in every congressional district of Illinois, and I believe that I am prepared to say that of all the people in the state there are none more fitted to cooperate with organized medicine in advancing our health propaganda.

In the first place no woman is invited to become a club member who has not average intelligence. The very departments of the federated women's clubs—art, American citizenship, conservation, community service, civil service, education, literature, legislation, public health, public welfare—suggest that those who would interest themselves in these various activities are women of intelligence and initiative.

In all the community groups, club women will be found among the better educated class. They are progressive women and they are women who think. Various issues are brought before them for their careful consideration, and in all instances I have found them willing to listen to both sides of a question. They are a socially minded class, they bind themselves together in bundles, and while they may differ in politics and religion, they do combine for the social uplift of their community and they work tremendously well for the abolishment of unsocial conditions.

They are fearless and tireless workers. They are not afraid to be found on the side of the minority and are persistent in their efforts at reform.

Club women are initiators. They will undertake to bring about decided reforms in their communities and initiate new methods or reform measures in libraries, schools, and even in the community politics. They are organizers. They will combine to establish a hospital, to create the necessary cooperative committees for

the creation of play grounds, for the cleaning up of city streets and alleys, jail reforms, building of club houses, and the transforming into club houses of abandoned churches, made so by the appearance of a community church.

They are the social leaders of their community. Women esteem it a privilege to belong to the leading club of their city or village.

Because of these various qualifications club women wield great powers for leadership in their communities. They are influential in advancing any wholesome project, when they are convinced that the undertaking is for the uplift and social betterment of their people; and so, my medical colleagues, I believe that club women are worth cultivating. They are the most important contact that we, as medical people, can make in our state for the carrying of the gospel of health to the lay people of every district, county, and hamlet of Illinois—one of the leading states of the nation.

With a knowledge of the club woman's potential powers as a background, I bring before you now what club women can do in their community for right methods, correct thinking, and many educational propositions which the medical profession can place before them.

1. They can stimulate community interest in any project of health instruction which a carefully selected committee will plan for them.
2. They can form health study classes in the 700 clubs of the state.
3. They can open their parlors for important groups of pivotal women in their community for special instruction along any line of medical education, which should first be given to leaders before it is given to masses.
4. It is within the power of club women to so censor movies as to make it impossible for indiscreet or unwholesome films to be shown in their towns.
5. Club women sit on boards of education, and can foster such health ideas as should naturally come up for consideration on such boards. It was the club woman, not the medical profession, who suggested, sponsored, and actually financed warm lunches in the public schools.
6. Club women can stimulate interest in the use of health films for visual education.
7. Club women afford perhaps the greatest opportunity our profession has for getting health

*Read before Section on Public Health and Hygiene, Illinois State Medical Society, Champaign, May 18, 1926.

before the various communities of the state. They can become the public health leaders of their community in bringing the attention of ministers to educational health messages on tuberculosis, etc. They could bring a medical speaker to address adult audiences in Sunday evening clubs, as well as to address the school children once or twice a year; they will assist in "health weeks," and disseminate knowledge about preventatoria in communicable diseases.

8. The club women are perhaps the best medium in the community through which insanitary dairies may be made sanitary. They stimulate the community's demand for pasteurizing milk, the purification of water, and the cleaning up of the city streets. Many clubs in the state have caused tubercular cattle to be examined.

9. They have improved the unhygienic and insanitary conditions of manufacturing establishments, and have contributed to the better care of the mentally deficient.

10. Club women can foster the putting on of health plays in the schools and churches, and they themselves will take part in the home talent efforts in health pageants and plays.

11. Club women will assist in the distribution of health literature, they will see that it finds its way into public libraries, and the public schools. They will keep racks in hotels, railway stations, public institutions, etc., filled with medical literature that is popularly written for the layman.

12. Club women have taken as their slogan, "A health audit on your birthday," and in every club all over this United States they make it one of their major projects to encourage and make popular the annual health audit.

13. Club women have already manifested their interest in the great health movement by asking for clinics, by requesting that examination be made of school children, and by fostering baby conferences in county fairs.

14. Club women will seek out neglected maternity cases—expectant mothers who are either too timid or too ignorant to consult the local physician, as well as those who feel unable to meet the nominal fee of the doctor.

15. They are a socially minded group; they are the mothers of the state; they are interested in the health of their families; and while there may have been some indiscretion in the whole-

sale examination of babies in public conclaves, nevertheless, these things are an indication of their interest in the modern health movement.

16. Club women will, if they are instructed, see the necessity for educating the youth along eugenic lines—to help our young people to realize that good stock is more important in the consideration of marriage than a bank account. You will agree with me that every school in our state should have a course, somewhere between the 8th and 12th grades, on heredity and eugenics which shall serve to awaken the youth to the necessity for careful selection of those mates whose heredity is free from the gross taints of epilepsy, insanity, feeble-mindedness, etc.

It is up to us, colleagues, to educate this great group of 80,000 intelligent women so that they may carry our gospel of health to the masses. We should spare no effort to keep this class educated in the progress of medical science. Club women are particularly concerned in many of the departments of medicine, notably pediatrics. The pediatricians of the state have a great opportunity in educating this great army of 80,000 club women in the essentials of pediatric care. They are directly concerned in a very material way in the support of infant welfare stations throughout the state. No less than \$88,951.19 was raised by the women of Chicago alone for the infant welfare stations of that city.

The club women are so interested in the run-about child—the pre-school child—that they have this year taken its examination as their single project in child welfare. The school child today enjoys medical attention because the club women created a keen interest in him.

Nutrition classes have been formed by club women, and many clubs throughout the state have taken it as their definite project to purchase milk that these children may have it to drink without cost to the dependent ones, and as low as a penny a cup to the others.

They make thousands of dollars a year for such work through the sale of tuberculosis stamps each Christmas season.

Club women need education in reference to adolescent problems—those normal physiological phenomena of developing children—that they may better understand and assist their own children.

Communicable diseases and venereal infec-

tions are both matters of prime importance, and it is our golden opportunity to bring to their attention knowledge concerning these diseases that they may intelligently endorse, foster, and push legislative activity for the six year trained health officers.

I wish you might have been present and have witnessed the consternation of the Board of the Illinois Federation of Woman's Clubs when I told them that out of 2,750 health officers in the state of Illinois, there were about 300 trained men and women. They simply do not know that these health officers in many of their communities are hardware men, grocers, plumbers, barbers, etc.

Club women should be educated regarding the care of the feet, proper shoe lasts for women, and the truth regarding the pelvic displacements due to high French heels, etc.

Club women should be educated by this Society of medically trained men and women regarding what service a woman should expect from her doctor. They should know how intelligently to discriminate between quacks and a well-trained member of our profession.

They should be enlightened regarding the cause of maternal deaths. They should know why it is important for a pregnant woman not only to have her urine analyzed and blood pressure observation taken, but they should understand that many thousand stillbirths in our state are directly traceable to luetic infections, which could have been detected by a proper examination of the blood. They could also be taught that proper anti-luetic treatment will prevent this needless loss of life.

They should be enlightened as to the reason why ignorant midwives should not practice. Their service should be enlisted in the survey of their various communities regarding the midwife situation; obtaining their names and the recording of neighborhood stories regarding the unnecessary death of mothers due to ignorant midwifery practice.

They should be educated about the prevention and control of tuberculosis. They are greatly interested in this subject. They raise thousands of dollars a year to maintain institutions in their

communities for the treatment of this dread disease. Club women should be educated regarding the dangers of quack remedies and cancer cures, as well as the dangers and risks of abortion. They would be interested in a popularly written story—in their own language—of the technically written exposures of quacks in the American Medical Association Journal.

Club women should be educated in the cause and prevention of heart disease—that captain of the men of death in our state and nation last year.

We should educate this vast army of women in the preventive work known so well to us, for diphtheria and scarlet fever. I wonder if this society knows that in some counties of our state vaccination is still looked upon as useless, something to be dreaded and feared, and if possible avoided.

The great eugenics movement will find a sympathetic audience among club women, and they should be taught to interest themselves in the creation of laws which will find potential criminals; and in legislation which will not only protect, but stop the reproduction of the potentially defective stock of this state. Their interest and influence must be used in community social gatherings which will permit normally minded young people to meet. Club women should be educated to interest themselves in social decadence of the original American stock.

Now I ask this society—are you going to leave such education to popular magazines? Are you going to leave these things to the hands of osteopaths and chiropractors, and commercial advertisers? Are you going to allow pseudo-scientific groups, who go to extremes, to come into this rich field that is now open for the presentation of sound, substantial, and wholesome training?

Health question boxes should be encouraged once a year in every club in the state. I know of no greater way to teach health than to answer the questions of a carefully prepared question box.

WHAT THE MEDICAL PROFESSION MUST DO

I congratulate the councilors of this state organization on the creation of a lay education committee. The beginning that they have made

in the state of Illinois is most commendable. But this work has just begun. Through this committee we should seek an opportunity to speak before every club in the state at least once a year, either in the public welfare department, the public health department, or the child welfare department.

In view of the increasing number of deaths from cancer, it seems to me that a fifteen minute speech should be given to every club in the state. The public health leaders should be circularized with the prominent symptoms of cancer of the pelvis, the breast, the stomach, and of the rectum. The opportunity lies before us to enlighten each of these 80,000 club women—most of them are in the cancer age, between 35 and 60—in such a way that they will recognize the early symptoms of cancer of the pelvis immediately and take such steps—so well known to us—as will intercept the dread disease and add years to their lives.

A brochure of health hints, short and to the point, would be an efficacious way to bring to the public welfare or public health department much helpful knowledge.

The examination of the pre-school child is ours to bring about. It is important. It will save both time and money for the child and parent, as well as to avoid a great waste which is now found in every community of the state.

One-third of all the deaths of the nation occur below six years. There are ten times as many deaths during the half decade of pre-school life as in the full decade of school life. Over 80 per cent. of all deaths from diphtheria occur below the age of five. Malnutrition is more prevalent in the pre-school age and rickets is essentially a pre-school disease. One-third of all the crippled are found in the pre-school child.

Now, the medical profession as a whole have opposed clinics and conferences; what are we going to substitute for them? Will we assume the responsibility and avail ourselves of the opportunity of so educating club women as to make it possible to carry out our ideals, to discourage that which is unsocial and insanitary, and to promote that which is best for the largest number in the communities of this state?

LYMPHO-SARCOMA OF THE APPENDIX WITH A NON-ROTATED CECUM* AND A REVIEW OF THE LITERATURE

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The exceeding rarity of lympho-sarcoma of the appendix and the difficulty of diagnosis before operation, is my excuse for a review of this subject together with a case which recently presented itself to me. No less than ten of our most prominent diagnosticians could not arrive at a definite diagnosis before operation and even following operation there was presented a picture of both tuberculosis and sarcoma combined.

There have been, all told, nineteen cases of primary sarcoma of the appendix reported in the entire medical literature of the world. Up to 1908, Harte of Philadelphia was able to find only six cases, while Garnette Wright of Manchester, England, in 1911, found three other cases and one which he reported, making a total of ten. In November, 1910, issue of "*Surgery, Gynecology and Obstetrics*," page 466, eleven sarcomas are listed, including three doubtful ones. In 1913, White and Whaland in the *Episcopal Hospital Reports*, Philadelphia, reported eleven cases of sarcoma of the appendix in the literature, including one of their own. Wohl, in 1916, found eleven cases of sarcoma of the appendix, but did not list White's case, nor those of Davis, DeJong, Smit and Wright, a total of five. Hugh Crouse of El Paso, Texas, reviewed to 1910 the literature on "Tumors and Retention Cysts of the Appendix" and mentions and lists all the cases of carcinoma, sarcoma, myoma, fibromyoma, cysts and myo-sarcoma of the appendix that he found since the first malignant appendix was recognized and described by Merling in 1838. The most recent case reported is that of Goldstein's in 1921 in the *American Journal of Medical Sciences*. He listed seventeen cases of primary sarcoma of the appendix, but did not include Glazebrook's case of endothelial sarcoma. In addition, he also mentioned Brinkman's case of primary sarcoma of the intestine and appendix.

Because of the rarity of sarcoma of the ap-

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pendix, the condition is one of particular interest from several points of view:

1. The origin of sarcoma of the appendix.
2. The type and frequency as compared with sarcoma of other parts of the intestinal tract.
3. The prognosis.
4. The clinical symptoms and diagnosis.

1. THE ORIGIN OF SARCOMA OF THE APPENDIX

It is very difficult to decide what group of cells in a particular area of tissue has been the starting point of a sarcomatous nidus. In the

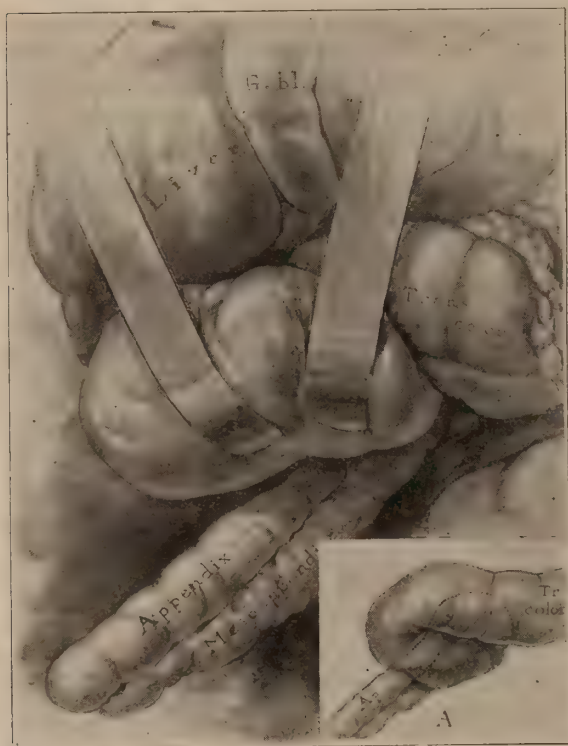


Fig. 1 and 2. Showing non-rotated cecum and pressure of appendix on hepatic flexure of colon.

cases reported, the tumor has been comparatively small and the diagnosis has been made on the routine microscopic examination of the specimen. According to White and Whaland, it is difficult to state whether these tumors have accompanied an inflammatory process or followed it, or whether they have resulted from an entirely independent process (sarcoma) that has later caused inflammatory change. Wohl states that the fact that primary sarcoma of the appendix may take its origin in an inflammatory process, forms a very strong additional argument for the removal of all appendices which show evidences of inflammation. Zaaier comments upon

the preceding existence of chronic appendicitis as an important factor in the etiology of malignancy of the appendix. He also calls attention to the youth of the patient.

Sarcoma is classed as a connective tissue tumor, but unlike other connective tissue tumors, the cells do not advance beyond their embryonic state but multiply as such. Difference in the predominating cell of the tumor has caused a subdivision of sarcoma into distinct types. However, while some sarcomas are composed entirely of one type of cell, other tumors show an admixture of cell types.

2. THE TYPE AND FREQUENCY AS COMPARED WITH SARCOMA OF OTHER PARTS OF THE INTESTINAL TRACT

The type of cell found in the reported cases vary, namely, small round cell (12); spindle cell (3); lympho-sarcoma (3) and endothelial sarcoma (1). These are all of the simple sarcoma types and evidently had their origin in some part of the appendix. The striking prevalence of twelve small round cell sarcomas and three lympho-sarcomas out of a total of nineteen cases, suggest strongly that the origin in these cases has been in the lymphatic structures so prominent in this organ.

The appendix is apparently far less frequently the seat of sarcoma than are other parts of the intestinal tract. The majority of the intestinal sarcomas are at the ileocecal valve. Here also, as in the appendix, the tumor most often seen is of the round cell variety. This suggests again the lymphatic structures in these regions as a starting point of the sarcoma.

3. THE PROGNOSIS

The diagnosis of sarcoma of the appendix has been in every case reported, that of the pathologist, and based on microscopic findings. The tumors as a rule, have been very small and very early in their development. In the majority of cases reported, the tumor was situated near the cecal end of the appendix with involvement of the cecum and draining lymphatics. In these, the prognosis has been grave, both as to recovery and recurrence. But in a few cases, the distal end of the organ was involved and widespread infiltration and metastasis had not occurred and in these the prognosis has been remarkably good. In the case reported by Warren, he mentions that

the patient was well and free from recurrence four years after operation. Wohl states that the prognosis in sarcoma of the appendix is less favorable than in carcinoma and that in the latter metastasis and recurrence is the exception. He concludes that sarcoma of the appendix, especially the round cell type, is highly malignant. If the tumor is small and situated some distance from the proximal end of the organ, and adhesions and involved glands are not present, the prognosis is good. The cecum and draining lymphatic glands should always be carefully examined and their condition determined. Most of the patients are young, the greater number occurring in females.

4. THE CLINICAL SYMPTOMS AND DIAGNOSIS

The symptoms present in nearly all the cases were those of acute or chronic appendicitis with pain in the abdomen, vomiting and sometimes constipation, fever and leucocytosis. The duration of symptoms varied from five days to many months.

Treatment. According to most authors, the treatment consists in simple appendectomy with resection of enlarged glands, followed by deep x-ray therapy. LeConte mentions the fact that simple removal of the appendix is sufficient to bring about a cure. Some of the good results are explained by Crouse as probably being due to the early symptoms and operation in primary malignancy of the appendix. Wells comments on the youth of the patients and states that he was able (1918) to find only one case which had died of carcinoma existing only in the appendix.

Report of Case: J. S., female, age nine and one-half years, was first seen in the middle of December, 1923, complaining of pain in the abdomen and vomiting. She had been sick for the past four weeks and had been in three hospitals, during which time she had been seen by three physicians. Each of the physicians said there was nothing wrong with the child.

When the patient was first seen by me, she had severe cramp-like pains in the abdomen, which seemed to be over the epigastric and umbilical region and which radiated toward the back. The pain had no relation to food-taking, and was not relieved by a bowel movement. It was so severe the patient would cry out. The pain would come on suddenly and during any time of the day. Vomiting had been present for about two weeks, during which time she vomited about three or four times a day.

Patient had measles, broncho-pneumonia, whooping cough at three and one-half years, frequent sore throats and a tonsillectomy several years previous. She has

one sister living and well, and the mother and father are in good health. Family history is negative.

On physical examination, there was at times tenderness over the ascending and descending colon. The remaining examination was negative. The hemoglobin was 85%; red blood count, 4,230,000; white blood count, 13,200; differential, neutrophils 76%; large mononuclears 16%, small mononuclears 7%. There was an afternoon temperature of 100.4. As the patient did not do very well, she was admitted to the Michael Reese Hospital for observation. The Von-Pirquet was negative, while the urine showed from eight to ten white blood cells per high power field. No tubercle bacilli



Fig. 3. Roentgenologic picture showing constriction in the hepatic flexure of the colon by hard appendix.

were found in the urine and a catheterized specimen was sent to the laboratory for guinea pig inoculation. This proved to be negative for tuberculosis.

During her stay at the hospital, she continued to have severe, cramp-like pains in the abdomen and blood and mucus appeared in the stool. A gastro-intestinal picture was taken and at the hepatic flexure was found an obstruction through which a barium enema could not be passed freely. Dr. Arens, who examined the x-ray pictures, reported malignancy about the hepatic flexure or a retro-cecal appendix. No less than ten physicians had seen this patient in consultation and

none would attempt to make a definite diagnosis. My original diagnosis lay between a high-lying appendix with a non-rotated cecum, a colitis and tuberculous peritonitis. Patient left the hospital and after six days returned for abdominal operation, as the abdominal pain continued to be severe.

there appeared a generalized maculopapular eruption, which gradually became more extensive. The right chest filled up with fluid and was tapped about every twelve days, and large amounts of blood-tinged fluid were obtained. No tubercle bacilli were ever demonstrated in the fluid afterward. During this time, she

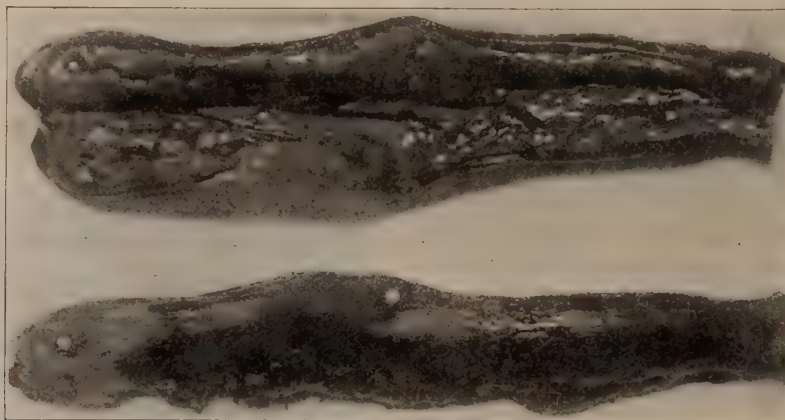


Fig. 4. Gross appearance of appendix divided.

Fig. 5. Gross appearance of appendix.

An exploratory laparotomy was done on January 12, 1924, and on opening into the peritoneal cavity, there was free fluid present of dark brown color. The omentum was matted and seemed to be tuberculous, though there were no definite miliary tubercles present. There was a non-rotated cecum present, which was lying high under the liver. The appendix was brought up into the wound and found to be about six inches long, very hard and firm, and as thick as one's thumb. The base of the appendix came up from underneath the transverse colon and exerted its pressure about the hepatic flexure, Fig. 1 and 2. At one place on the appendix there appeared what seemed to be a miliary tubercle. The meso-appendix was about one-half inch in thickness and very friable. The appendix was removed, but the stump could not be inverted. The abdomen was closed and a guttapercha drain inserted. The fluid from the abdominal cavity was sent to the laboratory and a guinea pig inoculated.

Drs. Schultz and Bloom, who examined the appendix, reported a lympho-sarcoma. About a week after the operation, there was a sudden discharge of fluid from where the drain had been removed. This was examined and two tubercle bacilli were found. On examination of other specimens, they could not be demonstrated.

On January 29, patient vomited, pulse went up to 140, the abdomen was considerably distended and there was constipation. A diagnosis of partial chronic intestinal obstruction was made. A part of the omentum was protruding through the wound, so it was decided to tie it off and remove it and close the wound with sutures. This was done January 30. Following this, the patient improved considerably. The distention was much less, she stopped vomiting and had several good bowel movements. Within the next few weeks, patient did very poorly. She continued to lose weight and

had received many deep x-ray treatments. On February 25 patient went into collapse and died. No autopsy could be obtained. The guinea pigs that had been inoculated with the pleural and peritoneal fluid showed no evidence of tuberculosis.

Roentgenological Report by Dr. Arens

Stomach: The stomach appears normal in type for the individual with a normal motility of five hours. The bulb fills well but shows a defect in the upper margin and takes an atypical course. This is constant.

Twenty-four hours: The barium column has reached the rectum and almost completely evacuated—a hypermotility.

Opaque enema: The colon fills readily throughout, is redundant and smooth, presenting the typical outline of a colitis. As the barium ascends to the transverse colon there appears to be a partial constriction which retards the passage of the barium for a short interval, then there is a sudden gush into what appears to be a reduplicated hepatic flexure after which a small amount passes downward into the cecum and ascending colon. Repeating this examination, the same phenomenon was observed, suggesting the possibility of an obstruction in the hepatic flexure.

Roentgenographic: The films confirm the fluoroscopic findings showing a normal stomach and bulbous duodenum that while not characteristic suggests the possibility of a defect, intrinsic or the result of some pathology in or about the hepatic flexure (Fig. 3). The hepatic flexure shows an atypical reduplication with a constriction the nature of which cannot be definitely ascertained. The possibility of a retrocecal appendix might be considered, as well as that of a malignancy. The appearance of the colon otherwise is that of a colitis.

Pathological Report by Drs. Schultz and Bloom

Pathologic Diagnosis: Lymphoblastoma (Lympho-Sarcoma) of Appendix Gross (Figs. 4 and 5): The appendix has been opened. It measures 10x1.8x1.2 cm. There are a few fine adhesions to the serosa which is slightly dark. The mucosa is thick and firmer than usual. The muscular layer is also thickened and contains some small hemorrhagic areas. The serosa, too, is thicker than usual. There is a small bit of tissue 2x1x1 cm. which has the appearance of lymph node in which there has been some fairly recent hemorrhage. **Microscopic:** Sections through the appendix—very little of the normal appendiceal structures are left. The glands (Fig. 6), submucosa, muscle (Fig. 7), and the serosa are heavily infiltrated with fairly large round cells which have uniformly a small amount of cytoplasm and fairly large lightly staining nuclei. Normal and abnormal mitoses are quite frequent in these cells which rest in a very delicate connective tissue framework. A section through the peri-appendiceal fat (Fig. 8) shows it to be heavily infiltrated with the same cells as those which have infiltrated the appendix. There are no lymph follicles here; occasionally there are some fat vacuoles. The cells here are exceedingly uniform in size. Mitotic figures are much more frequently present than in the section of the appendix (Fig. 9). The tumor is composed of what are probably young lymphoid cells. This does not seem to be a case of lymphogranulomatosis but rather a malignant lymphoblastoma (lymphosarcoma).

Pathological Report of Tissue Removed at Second Operation

Pathologic Diagnosis: Acutely infected polymorphic sarcoma.

Gross: Two rather firm gray-white pieces of tissue together measuring 1.2x1.6x0.3 cm.

Microscopic: Section presents several different pic-

ture. Along one border there is some fat which lies embedded in a stroma composed of large darkly blue staining cells. These cells have comparatively little cytoplasm. Abnormally mitotic figures are frequently present, and there are some cells, too, which have large clear vesicular nuclei. In some areas there are fairly

long blue strands of fibrillar material which is probably old nuclear material. In other areas, the section contains many more of these large darkly staining cells. Here, however, they are grouped in nodules lying imbedded in a framework of fibrin and the fibrin strands contain many polymorphonuclear leukocytes. These large, deeply staining cells vary a great deal in size and shape and irregular mitoses are more frequent here than in the part of the section first described (Fig. 10). Along one border of the section there is a row of clumps of bacteria-like structures.

REVIEW OF CASES REPORTED IN THE LITERATURE

1. *Guilford:* Reported in 1893. Female, age 27 years, suffering with symptoms of appendicitis for 13 years. Palpable mass present in right lower quadrant; diagnosis, sarcoma of kidney; at operation, appendix adherent to colon and ileum. Glands at root of mesentery involved. Appendix removed with adjacent parts of ileum and colon. Spindle cell sarcoma. No recurrence. Patient well six months after operation. The growth is one of an interesting example of transformation of inflammatory cells into sarcoma cells as a result of prolonged irritation.

2. *Glazebrook:* Reported in 1895. Colored male, age 55 years, who had died suddenly from cerebral hemorrhage. At autopsy a tumor about the size of a pigeon's egg was found in the appendix near the distal end. No metastasis present. Reported as endothelial sarcoma.

3. *Warren:* Reported 1898. Male, age 6 years. Had been suffering for about a month

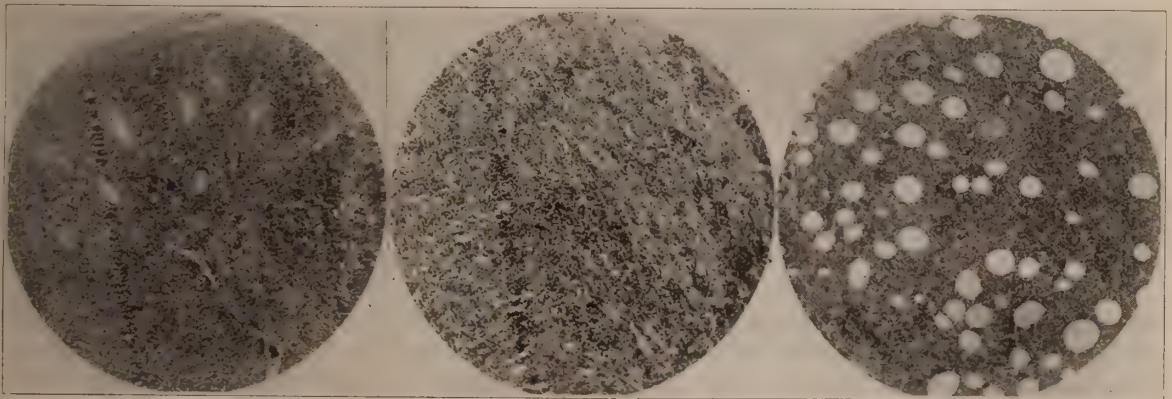


Fig. 6. Glandular infiltration with sarcoma cells.

Fig. 7. Sub-mucosa and muscularis infiltrated with cells.

Fig. 8. Infiltration of periappendiceal fat with sarcoma cells.

tures. Along one border there is some fat which lies embedded in a stroma composed of large darkly blue staining cells. These cells have comparatively little cytoplasm. Abnormally mitotic figures are frequently present, and there are some cells, too, which have large clear vesicular nuclei. In some areas there are fairly

with symptoms of appendicitis. Tumor mass palpable at McBurney's point. Appendix found to be as thick as one's thumb with involvement of glands at root of mesentery. Resection of cecum and distal portion of ileum with end to

end anastomosis by means of Murphy's button. Round cell sarcoma. Patient well four years after operation.

4. *Davis*: Reported in 1900. Male, age 51 years. Suffered for 12 months with recurrent attacks of pain in right iliac fossa. The appendix was lying behind the cecum, firmly adherent and bound down by the results of previous inflammation. Cecum apparently not affected. Small round cell sarcoma. Five months after operation patient was in good health and had gained 14 pounds. Father gave history of cancer.

5. *Paterson*: Reported in 1903. Male, age 39 years. Symptoms of appendicitis for three months with a palpable tender mass in right lower quadrant. Appendix was found to be thickened, firm and bound down by adhesion.

lower quadrant. Appendix three and one-half inches long, thick as one's thumb, very friable, hard and adherent. Fractured at base like a carrot. Neighboring glands enlarged. Cecum and ileum normal. Cecum, glands and appendix removed. Round cell sarcoma. Recurrence on left side and death nine months after. Patient also developed a pleuritic effusion.

8. *Carwardine*: Reported in 1907. Male, age not stated. Symptoms of recurrent appendicitis. White tumor, size of a hazelnut present at tip of appendix. Some neighboring glands enlarged. Lympho-sarcoma. Result of operation not stated.

9. *Stewart*: Reported in 1908. Male, age 35 years. Recurrent attacks of appendicitis. Head of cecum covered with adhesion. Appendix

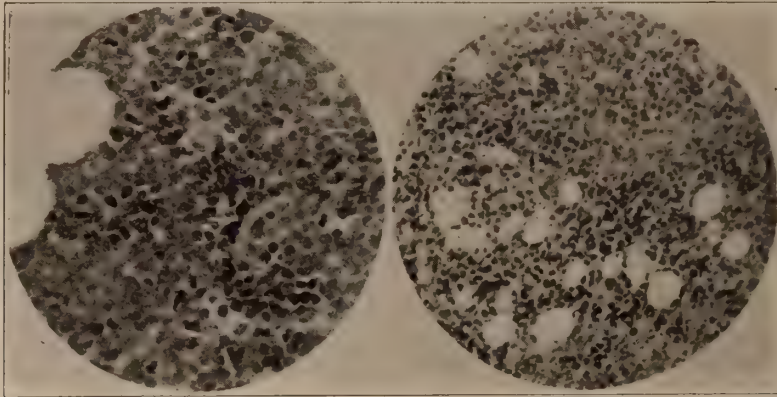


Fig. 9. High power showing mitotic figures.

Fig. 10. Showing tumor cells in omentum.

The cecum was thickened for a radius of about one-quarter of an inch around the attachment of the appendix. Appendix and cecum removed. Died six hours after operation. Appendix was 16.5 cms. long and 10 cms. in circumference at the thickest part. Round cell sarcoma. Autopsy showed no trace of tumor elsewhere.

6. *Bernay*: Reported in 1905. Female, aged 29 years. Symptoms of chronic appendicitis for one year. Hard palpable tumor mass in right iliac region. At operation adjacent wall of cecum involved. Appendix and cecum removed. Two years after operation tumor appeared in abdomen which was considered to be a recurrence Round cell sarcoma.

7. *Cardwardine*: Reported in 1907. Female, age 45 years. Symptoms of chronic appendicitis for five months with frequent attacks of severe colic and diarrhea, palpable tumor mass in right

very friable. Fibro-sarcoma. Result of operation not stated.

10. *De Jong*: Reported in 1908. Adult, male. Appendix contained a small fecal concretion in its central portion and at its tip, there was a tumor the size of a hazelnut which gave the appearance of a lymph-gland. Simple appendectomy. Round cell sarcoma.

11. *Wright*: Reported in 1911. Male, age 17 years. History of colicky pain, vomiting and constipation ten days before admission. Mass felt in abdomen at level of umbilicus. At operation, there was found an intussusception commencing in the cecum and extending to the transverse colon. This was reduced. The tip of the appendix was about the size of the terminal phalanx of the thumb and there were several enlarged glands lying along the inner side of the cecum and ascending colon. Appendix,

glands, cecum, ascending colon were removed and an ileo-colostomy done. Lympho-sarcoma. Patient well two years after operation. Operator reported nine cases in literature up to 1911.

12. *Powers*: Reported in 1910. Female, age 17 years. Suffered for about five weeks, with a fairly typical attack of appendicitis. At operation, appendix was inflamed, hard and large at middle. Report came back small round cell sarcoma. Patient died ten weeks after operation of a general sarcomatosis.

13. *Jones*: Reported in 1911. Female, age 26 years. Father died at age of 53 of metastatic sarcoma of the retroperitoneal lymph glands, which resulted from a primary growth in the testicle.

Four years previous to operation, patient gave a history of injury to right side, following which she had attacks of pain in lower abdomen every six months. On examination a small tumor the size of a walnut could be palpated at McBurney's point. At operation, the head of the cecum was covered with adhesions which were particularly friable, out of which the appendix was brought out. It was also of the same friable consistency. When the report came back spindle cell sarcoma, the abdomen was opened up five days later and the cecum resected. A lateral anastomosis was done between the ileum and the ascending colon. At the time of this report, patient was in good health. In this case, there was a low-grade inflammatory process, which eventually resulted in a true sarcoma. Letulle, Weinberg, and others have laid special stress on the probability that chronic inflammation change is the precursor of a malignancy in the appendix, just as it is well known in the uterus and in the stomach.

14. *White*: Reported in 1913. Female, age 25 years. Admitted to hospital in 1909, complaining of pain in right lower quadrant and vomiting. Patient had always been well, but had had one previous similar attack. Tenderness and rigidity present over McBurney's point. No mass palpable. At operation, condition was found to be one of sub-acute appendicitis. Grossly, there was a more or less circumscribed area one and one-half cms. in diameter which was pale and of rather firm consistency at junction of proximal and middle third of appendix. Histologically round cell sarcoma. Patient well four years after operation.

15. *Wohl*: Reported in 1916. Male, age 35 years. Symptoms of chronic appendicitis. Appendix densely adherent to all of cecum. Very friable, friability extending toward cecum. Round cell sarcoma. Recurrence four months after operation and death three months later.

16. *Smit*: Reported in 1916. Soldier, age 44 years.

17. *Rhodenburg*: Reported in 1919. Child, 4 years of age. Symptoms of chronic appendicitis. Lympho-sarcoma. Alive ten months after operation. In his report, stated that after a thorough search of literature, he found his to be "the first case of lympho-sarcoma of the appendix." On section, there was a typical lympho-sarcoma involving all the coats of the appendix, extending into the meso-appendix and infiltrating the cecum.

18. *Brinkman*: Reported in 1920. Child, age 7 years. Sarcoma of intestine and appendix. Alive nine months after operation. Case of primary sarcoma of intestine. While the appendix was not found to be seriously involved, the actual mass consisting of a hard flat growth was found about three inches from the ileo-cecal valve which produced partial obstructed interference to the passage of the bowel contents. Child had three attacks of what appeared to be acute appendicitis with recurring attacks at intervals of two weeks. Mass resected.

19. *Goldstein*: Reported in 1921. Female, age 25 years. Symptoms of chronic appendicitis. Round cell sarcoma. Mass present in appendix and head of cecum. Thin band found constricting gut low down in right iliac fossa. Simple appendectomy. Patient well eight months after operation. "Mass" in cecum could not be felt eight months after operation, so it was thought to be inflammatory in character.

CONCLUSIONS

1. Compared with carcinoma of the intestinal tract, sarcoma is rare and the appendix is apparently the less frequent seat of the neoplasm.

2. Sarcoma of the appendix of any type is a very great rarity.

3. All the cases showed symptoms resembling attacks of acute or recurrent appendicitis. It is impossible to make a correct diagnosis before operation.

4. The following are the only authentic and accepted cases of primary sarcoma of the ap-

pendix found recorded in the entire medical literature of the world: Those of Guilford, Glazebrook, Warren, Davis, Paterson, Bernay, Carwardine (2 cases), Stewart, De Jong, Wright, Powers, Jones, White, Wohl, Smit, Rhodenburg, Brinkman, Goldstein and the author's case. The case of Glazebrook is doubtful, while that of Brinkman's is one of primary sarcoma of the intestine and appendix.

5. All appendices removed at operation and at autopsy should be carefully examined both macroscopically and microscopically in consequence of which there may be more malignant appendices found than at present.

6. When operating for a diseased condition of the appendix and a malignancy is suspected, the adjoining head of the cecum and the draining lymphatic glands should be examined and their condition determined and a proper operative treatment instituted.

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THE VALUE OF THE DENTAL RADIOGRAPH IN DETECTING CHRONIC PERIAPICAL INFECTION.*

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The theory of focal infection postulates first of all the presence in the host of a localized area harboring bacteria. In attempting to find the

focus responsible for some systemic disease, the possibility of dental infection is usually considered. The dental radiograph is largely relied on to detect chronic dental infection. The question comes up as to how far one can translate radiographic evidence of infection into terms of bacteria. Often certain tissue changes revealed by the x-ray are considered as synonymous with infection. On the other hand, the possibility of infection is often excluded on the basis of radiographic findings. Active infection necessitates the presence of bacteria. The problem is largely a bacteriologic one, yet relatively little work has been done on the correlation of bacteriologic and radiographic findings.

To obtain further data I have cultured the apex and periapical tissues from 1,500 teeth. Deep tubes of glucose brain broth agar and glucose brain broth, which afford all gradations of oxygen tension, have been used as culture mediums. The hydrogen ion concentration is approximately 7.0. The nutritive qualities are especially favorable for the growth of the organisms in infections about the teeth. The agar medium shows also the number of bacteria in the material inoculated, which can be grown. Only sufficient agar is added to barely solidify. This does not retard growth yet holds the colonies discrete. The broth medium is used for the inoculation of animals, for transplants to blood agar plates, and for identification of the organisms present by the gram strain. The method of preparation has been described elsewhere.¹

In obtaining the material for culture the field of operation was prepared by first scrubbing well with gauze the teeth to be extracted. The teeth and gums were then painted with iodine, the iodine was removed with alcohol and the area of operation walled off with sterile gauze. The tooth was extracted with sterile forceps. After extraction the apex of the tooth was cut off with a sterile instrument directly into a tube containing about 1 c.c. of sterile 0.85 per cent. sodium chloride and a small amount of sharp sand. In making the culture, the tube containing the root tip was well shaken to macerate the tissue on the tip of the tooth. The culture material was poured into a deep tube of glucose brain agar which has been heated and cooled to 40° C. The tube was quickly inverted once and allowed to harden. The small amount of salt solution re-

*Paper read before a joint meeting of the Chicago Medical Society and Chicago Roentgen-Ray Society, Chicago, Ill., Dec. 15, 1925.

1. Haden, R. L., *Arch. Int. Med.*, 32, 828, 1923.

maining in the tube was poured into a tube of glucose brain broth. The inoculated tubes are incubated at 38° C for from 24 to 48 hours. Usually the maximum growth takes place in 24 hours.

Gram stains were routinely made of the positive broth cultures.

For determination of type, transplants were made from the broth tubes to blood agar plates. Single colonies of streptococci were picked from the agar plates and transferred to a tube of brain broth, and incubated. From this tube transplants were made to the carbohydrate broth tubes.

Clinical Material. Apical cultures have been made from over three thousand teeth. For statistical purposes I have included here 1,500 cultures from incisors, cuspids and bicuspid only which had been extracted without contamination. Controls are necessary to determine the chances of error. The best controls are obviously cultures of vital teeth employing the same technic as in culturing the pulpless teeth. I have constantly cultured vital teeth for this check, thus affording a base line for the interpretation of results obtained in pulpless teeth. The material was obtained from patients entering a pay dental clinic. They were largely ambulant patients who came primarily for dental treatment. Some were under medical treatment in a hospital for systemic disease. Others while ambulant, were referred by physicians for the removal of dental foci which were considered related etiologically to systemic disease.

The radiographs have been made by a uniform method of exposure and development giving constant results. At least 14 films were taken for each patient, affording at least two views of each tooth.

I have divided the teeth cultured into three groups: 1 vital, 2 pulpless and negative in the radiograph, and 3 pulpless and positive in the radiograph. I have classified as vital those teeth which respond to the electric current. In these the pulp functions though not necessarily normally. Teeth which show no response to stimuli have been classified as pulpless. These are certainly pulpless from the standpoint of function, regardless of whether the pulp is still in position through dead, or has been mechanically removed. There is no common agreement as to exactly what

teeth should be placed in the radiographic group. I have taken a conservative attitude.

Results of Quantitative Cultures. Four hundred cultures were made from vital teeth (Table I). It is assumed that vital teeth without caries are sterile, hence positive cultures in this group are taken as indicating only the chances of technical error; 85.5 per cent. showed no growth in the agar tube, and 45 per cent. were sterile in the broth culture. The high percentage of positive broth cultures from vital teeth emphasizes the futility of using broth only as a routine culture medium. It is apparent that positive cultures in broth from pulpless teeth mean little when such a high percentage of positive cultures are obtained from vital teeth. Of the 14.5 per cent. of positive cultures in agar, 9.8 per cent. contained less than 10 colonies per tube. Only 1.2 per cent. contained less than 10 colonies per tube. Only 1.2 per cent. of the total contained as many as 100 colonies per tube; 4.8 per cent. of the 400 cultures showed 10 or more colonies per tube.

The results of cultures of pulpless teeth are of value only in comparison with the result of cultures of vital teeth. As the best basis for comparison I have arbitrarily selected the groups of positive cultures in which the agar tube contained 10 or more colonies. The results of the cultures from vital teeth indicate such contaminating organisms as were found were usually less than ten per tube.

Five hundred radiographic positive pulpless teeth were cultured (Table I); 26.6 per cent. showed no colonies in the agar shake tube; 44.2 per cent. have over 100 colonies and 73.4 per cent. have one or more colonies; 62.8 per cent. had 10 or more colonies. A high percentage of the positive agar cultures showed a large number of organisms; 9 per cent. of this group were sterile in broth.

Six hundred pulpless teeth with negative radiographs have been cultured (Table I); 44.3 per cent. of these showed no organisms in the agar shake tube; 25.7 per cent. had over 100 colonies and 56.7 per cent. 1 or more colonies. The comparative group containing 10 or more colonies per tube, constitute 46.2 per cent. of the total number; 16.8 per cent. were sterile in broth.

The most noteworthy finding in the roentgen-ray negative groups is the high percentage showing bacteriologic evidence of infection without

radiographic evidence. The incidence of infection is nearly as high as in the radiographic positive group. Considering all pulpless teeth together, 36.3 per cent. showed no colonies in the agar tube; 34.1 per cent. had over 100 colonies and 64.6 per cent. 1 or more colonies, 53.7 per cent. had 10 or more colonies; 12.9 per cent. were sterile in broth.

The cultures included in this report have been made over a period of three years. The percentages have varied little. In the first 254 cultures from roentgen-ray positive teeth, 60.6 per cent. showed 10 or more colonies, while for the total of 500 the percentage is 62.8.

Types of Organisms. A smear was routinely made from the broth culture and stained by gram. In the 1,091 positive broth cultures a gram negative bacillus was found once. In 963 cultures streptococci only were found. In 9 cultures streptococci were mixed with staphylococci and in 37 times with gram positive bacilli. Streptococci were present alone or mixed with other organisms in 1,009 or 92.5 per cent. of the 1,091 positive cultures. Gram positive bacilli only were found 58 times, a staphylococcus only 19 times and the two together 3 times.

Some of the stains of streptococci grew in long chains. The most common type, however, is that found as a diplococcus. The diplococcus is usually elongate, often lanceolate, and thus closely resembles the pneumococcus. The morphologic appearance, however, varies greatly with the culture medium. An organism appearing in diplococcus form in broth may show very long chains in agar.

Types of Streptococci. Three hundred and forty-six of the positive broth cultures were transferred to blood agar plates. Three hundred and two were found to be pure cultures, usually of non-hemolytic streptococci. Only three times were hemolytic streptococci found, twice in pure culture and once associated with a staphylococcus aureus; 44 times mixed cultures were present. In the 66 cultures from roentgen-ray positive teeth, only three were found mixed on transfer to blood agar plates. The non-hemolytic streptococci were usually green on blood agar. Not infrequently, however, the colonies were grey.

SUMMARY AND CONCLUSION

The results of periapical cultures from 1,500 incisor, cuspid and bicuspid teeth are reported.

All cultures have been made in deep tubes of glucose brain broth and glucose brain agar which affords most favorable nutritive conditions, varying oxygen tension, and allows the number of bacteria grown to be estimated.

Vital teeth have been routinely cultured to determine the chances of error in technic.

The results of quantitative cultures from different types of teeth are given.

For comparative purposes the number of tubes containing 10 or more colonies is most valuable; 4.8 per cent. of the vital group; 62.8 per cent. of the pulpless teeth with positive radiograph and 46.2 per cent. of the pulpless teeth with negative radiograph showed 10 or more colonies per tube.

The non-hemolytic streptococcus is by far the most commonly found organism. Hemolytic streptococci only rarely occur in chronic periapical dental infection.

431 Greenway Terrace.

TABLE I
Results of Apical Cultures From 1,500 Teeth

Group	Total number	Number of colonies in deep agar tube								Broth	
		0 Per cent	0-10 Per cent	10-50 Per cent	50-100 Per cent	Over 100 Per cent	1 or more Per cent	10 or more Per cent	Positive Per cent	Negative Per cent	
Vital	400	85.5	9.8	2.8	0.8	1.2	14.5	4.8	55.0	45.0	
Pulpless teeth with negative radiograph .	500	44.3	9.5	16.7	4.0	25.7	56.7	46.2	83.8	16.2	
Pulpless teeth with positive radiograph .	500	26.6	10.6	11.4	4.2	44.2	73.4	82.8	91.0	9.0	
All pulpless...	1100	36.3	10.0	14.3	4.0	34.1	64.6	53.7	87.1	12.9	

DISCUSSION

DR. C. F. B. STOWELL, D.D.S.: I feel as if I were presuming, to come before medical men to discuss the problems involved in the matter presented so well by Dr. Haden. As I view it, the medical profession has direct charge over all phases of the elements affecting the health of the people. Nothing more than this can be included and certainly nothing less. All border-line questions should be left to the determination of the general practitioner and the internist if medical prophylaxis is to dominate. The dictates of preventive medicine and preventive dentistry represent the highest plane of service. A very large percentage of the public want neither, but this is aside from the point.

Looked at in this way, it is easy to understand that dentistry cannot be considered a professional integer, *per se*, but a part only of the entire field of medicine. I firmly believe that to grasp, hold and practice this view would ameliorate materially the inter-relations among all branches and specialties.

The problems well within the field of a specialty can be left safely to the specialist therein. For example, caries, or decay of the teeth, comes inside the scope of dentistry and because of special training in its treat-

ment, it can be left to dentists, not because they know the actual etiology of caries nor the cure thereof, but largely because attempts at treatment have little or no systemic effects.

When, however, the pulp of a tooth has become pathologic, whether because of accidental exposure to the fluids of the perennially infected mouth, or as a result of that kind of dental surgery called by Dr. Buckley "reasonable asepsis," whatever he means by modifying asepsis, then, because the pulp is an embryonic mesodermic tissue with little or no resistance to infection, and because the circulation within the pulp is a part of the whole circulation, the problem has shifted from one of dental prophylaxis to one of medical prophylaxis.

Under these conditions, the pathology is positively one that is on the border-line, and in many cases it has been projected far over the border-line. For this and other reasons too numerous to mention in a discussion of another man's paper, I am glad to hear from the medical side of the issue.

I want to assure you that even though a dentist is serious and intends well, his training is not equal to that necessary to sense the far-reaching and untoward effects of ill-advised and ill-timed mechanical procedures. Dentists as well as physicians, often lack what in art is called a "sense of the significant." A willingness on the part of the dentist to co-operate and consult with physicians who, in turn, have time and interest for more than cursory examinations, is the kind of consideration these problems should get.

As Dr. Haden has pointed out, so many dental radiographs show no evidence of infection. Radiography is only an aid to diagnosis, not as some deem it, the alpha and omega thereof. A physician should demand that in addition to the radiographs, tests of the teeth should be made to determine their vitality. Many teeth have dead pulps not radiographically evidenced as such.

Infected teeth are a constant threat. They strike at the vulnerable parts by metastases. No tooth is as valuable by comparison as has been heralded. The dentist or physician who permits a patient to remain the host of an infected tooth jeopardizes his health.

As to the dentist passing snap judgment on a patient's physical condition, we read from the writings of Dr. C. J. Grieves, of Baltimore, in the *National Dental Journal*, as follows: "The dentist who without medical assistance of the highest order attempts to distinguish between the sick and the well patient and who presumes by a glance and a few routine questions to determine instantly matters which might keep hospital laboratories busy for days, dabbles superficially in internal medicine; when he does not know the actual etiology of or the sure cure for a single dental disease." In view of this remarkable statement, I feel that in operative dentistry there is quite enough to do without attempting those activities clearly outside, that entail the training of an internist. Let operative dentistry attend caries, study its etiology and its prevention, and prevent its progress pulpward; let it also attend incipient gingivitis. On the other hand, is it asking too much of the medical practitioner and the research men of the medical profession,

that they take hold of this work as Dr. Haden has and give us further light thereupon. I believe that the infected tooth and periapical pathology is a medical problem much more than a dental problem. The dental profession cannot lift itself out of the slough by its own boot-straps. The leaders keep pushing it back. It has been complained of that the young men of the dental profession are willing to see the futility of salvaging the pulpless tooth. As far as I am able to discern, they constitute our main hope. We cannot look for a change in the ones who are beyond the years of adaptability. It would cost them too much in time and prestige.

Here is a sample of a dental leader's conception of infection, a word that he laments has been sold to the public: In a discussion in October, J. P. Buckley, D. D. S., condemned the extraction of all infected pulpless teeth, as a damnable criminal practice. At the same time he condoned the practice of the treatment of the infected pulpless tooth by a method he referred to as "reasonable asepsis." What from a surgical standpoint can he mean by "reasonable asepsis"? Is there relativity in asepsis? Reasonable asepsis, forsooth!

A radiograph has the power to reveal a rarefaction of bone, an absorption of a tooth apex sometimes, a granuloma at times, a pulp nodule, a break in the durum stratum if the angle of ray-incidence is just right, a thickening of the peridental membrane. What it does not show at times is also of vast importance for you to know. Here are a few things that the roentgen ray often fails to reveal: A dead pulp, an apical infection, a peri-cemental pathological incrustation, peri-cemental and apical granulomata. In short, the radiograph is but an auxiliary in diagnosis and not a substitute for the microscope or the physical examination.

Dentists have been equipped by their training to give physicians all the information as to tooth pathology, if requested. All this training is not exhausted in a street-car examination of a high-grade set of dental x-ray films. It includes all the dental pathological data, no matter how seemingly inconsequential, such as caries, tooth vitality, gingivitis, pyorrhea, tooth impactions, irregularities of occlusion, ill-fitting crowns, and fillings that have failed.

Physicians should sense this: In dental disorders there is no such thing as an auto-corrective element. Progress is from bad to worse, from caries to pulp involvement, from pulp involvement to apical infection, from apical infection to metastatic infection.

A pulpless tooth is a constant potential menace. It demands watching if you keep it in the jaw, and even if you do watch it by every agent at our present disposal, you cannot be sure of its harmlessness. Extraction of the pulpless tooth is today the only sure way of preventing its causing systemic complications.

Furthermore, the pulpless tooth is a perforated test tube. The culture medium is the organic part of the dentin and the organic odontoblastic fibres which are not removable with the pulp. The warm room is the body itself. Like the medium of Dr. Haden's experimental tubes, the oxygen tension varies, decreasing to an almost ideal anaerobic near the apex. Colonies in-

crease in number and virulence under the optimum; through the foramina they pass to the periapical space.

Available medications may attenuate the organisms, but never sterilize the dead non-resisting interior of the tooth, and as to removing the infection mechanically, one has about the same chance as to use a dental broach for this purpose in one of Dr. Haden's test tubes.

In conclusion, I would say that the radiograph is misused. Positive radiographic evidence of pathology is flagrantly disregarded and negative radiographic evidence is held as a smug surety of safety. Both patient and physician want good news. There is the temptation.

THE DOCTOR AND THE LAW*

E. W. RAWLINS

Member of the Chicago Bar

CHICAGO

The law seems pretty harsh to the members of the medical profession. Almost every time a doctor consults a lawyer because of a suit started against him he is inclined to find fault with lawyers and with the law that permits such things. The truth of the matter is that the law in Illinois is really pretty favorable to the medical profession. The law is favorable in that the rule is laid down that before there can be a recovery from a doctor or dentist in a malpractice suit two things must be proved; first, that the doctor is guilty of unskillfulness or negligence, and second, that the improper treatment caused the injury complained of, both of which must be proved by medical testimony. The courts adhere quite strictly to these rules and it is a difficult matter to prove a case against a doctor or dentist unless it is done by some unprincipled member of the profession except of course in case there has been actual neglect, etc.

There are some things that a doctor should watch carefully in order to avoid a possible suit. One is the question of performing an operation without consent. The law holds that even though a surgeon performs an operation on a patient with satisfactory result, if that operation is done without the consent of the patient he has done wrong and may be held liable. His advice to the surgeon is that unless he knows the patient very well, he should have written consent to perform an operation. In some of the hospitals

signed consent is now required, which is a very excellent thing.

Another thing which brings about a great many law suits is the effort of the doctor to collect a bill. The doctor renders a bill to which the patient pays no attention. In course of time he starts suit for collection. The patient promptly replies by starting a suit against the doctor for malpractice. Of course, those things usually do not amount to much, but occasionally they cause considerable trouble. He questioned the advisability of pressing payment in cases where inquiry regarding treatment may be made. He cited a case in point. Another error is made in this respect—a doctor sends a bill a couple of times and receives no response. Then the patient calls up and tells the doctor he is not satisfied with the work, but if he will take a certain amount and close the account he will make no trouble. The doctor replies by sending a bill for twice the original amount. This is wrong. If a doctor is going to start suit for collection he must stand by the original amount of the bill.

X-ray burns are responsible for a great many suits against the medical profession. These are exceedingly dangerous, because those burns heal so slowly and look so bad.

Another type of case is that growing out of burns from hot water bags. There is seldom a year goes by that he does not have one or two of these cases. Of course, the doctor cannot stay constantly with the patient in order to see that the nurse does not leave a hot water bag on too long and these suits as a rule do not amount to much.

Since the advent of local anesthesia and serum treatments there has been an epidemic of cases of broken needles and instruments.

In his opinion the medical profession in Chicago is about as loyal as any profession could be. They are not looking for any chances to go into court and testify against a brother physician. They are ready to cooperate. But there is a tendency where one doctor succeeds another for him to leave the inference that the former man's work was not right. It is inadvisable to discuss a previous doctor with the patient. It is true that many patients who change doctors feel the wrong thing was done and are quick to note any reference to it by the next man. Doctors

*Address before North Shore Branch, Chicago Medical Society, December 1, 1925.

should be careful about this because many times it leads to damage suits.

DISCUSSION

Dr. D. B. Pond asked regarding a permit to operate on minors. The legal age for girls is 18, but he wanted to know what was the legal age for surgery.

Dr. J. B. Coughlin asked regarding the property rights in case a doctor is sued and the plaintiff recovers but the only assets the doctor has is a home owned in joint tenancy with his wife.

Mr. E. W. Rawlins answered Dr. Pond by saying if a girl is 18 years of age the doctor would surely be entitled to rely on a permit from her to perform an operation. In the case of minors where possible permission should be given by the parents or guardians; where this is impossible and an operation is imperative the doctor simply must go ahead and do the best he can in the interest of humanity.

In answer to Dr. Coughlin he said there was nothing definite regarding this in the Illinois law. It was his opinion that the interest the husband has in this joint tenancy is subject to claim.

105 So. La Salle St.

EARLY HISTORY OF THE DISTRICT MEDICAL SOCIETY OF CENTRAL ILLINOIS*

JOHN H. MILLER, M. D.
PANA, ILL.

The first move toward the organization of the District Medical Society of Central Illinois was made at the annual meeting of the American Medical Association at St. Louis, Mo., in May, 1873. Several members of the Aesculapian Medical Society of the Wabash Valley, the oldest medical society in Illinois, were in attendance at this meeting and with other physicians of central Illinois suggested the organizations of a district medical society in the central portion of the state.

To the late Dr. C. V. Rockwell of Taylorville belongs the credit for putting the idea in motion. He took the matter up with the various county societies in the district and at a meeting of the Montgomery County Medical Society in June, 1873, Dr. Thomas D. Washburn of Hillsboro was instructed to correspond with the different county medical societies with the result that a meeting was arranged for at Pana, Ill., April 28, 1874.

A glance at the roster of the original membership of this society, twenty-one in number, all good and true pioneers who met on that date for the purpose of drafting a constitution and by-

laws for the government of this body, is like a voice from dim but glorious past, for these men practiced their profession at a time when brawn as well as brains counted.

They were not cave men, neither were they cake eaters but virile men who knew what it was to face the cold of winter and endure the heat of summer, more often than otherwise traveling on the hurricane deck of a faithful steed, their armamentarium packed in a pair of pill bags under them on the saddle. No paved roads or warm enclosed cars to carry them quickly and comfortably to their patients. This was fifty-two years ago, two years longer than a semi-centennial, two years having been lost to this society owing to the fact that the World War had nearly all of the active members at the front. Fifty-two years ago, I would judge, found most of our active members of today along about the diaper age or even more remote as prospects. The flight of time now reveals to us the grandsons of some of these pioneers now sitting in our councils as active members.

We find among the founders such men as Washburn, Rockwell, Chenoweth, Whitten, Hood, Deming, at whose office the first meeting was held, Wilson, David Prince, Fink, Huber, Salander, Barton, Cook, Wills, Catherwood, Clark, Fringer, Griffith, Waggoner, Haynes, Slater, Bennett, Beach, Keller, Haller and others long since gone to their reward.

These men were dignified, firm, of rough and rugged character, always ready to give a reason for the faith that was in them and defend it to the bitter end, yet they had a pleasant personality and one always felt better for having known them.

They were the family physicians of their day, the men who were first to share the joys and the sorrows of their patrons. They were the kind described by the author of the Bonnie Brier Bush as "men of parts," a breed of the *genus homo* almost extinct at this time, in fact they are almost in a class described by the old backwoodsman who when he saw a giraffe for the first time exclaimed: "There ain't no such animal."

At the first meeting Drs. Waggoner of Shelbyville, Washburn of Hillsboro, and Hood of Litchfield, were appointed a committee of three to draft a suitable constitution and by-laws. At the afternoon session of the same day they presented

*Address at Semi-Centennial Meeting, Pana, Illinois, April 27, 1926.

the same and as an evidence of their thoroughness you will find it has been sufficient to this day with only a few minor amendments.

Having been elected to a membership in this society in April, 1880, I had the pleasure of knowing most of these men personally and of sitting at their feet, so to speak, absorbing some of the knowledge and wisdom that had come to them through the school of hard knocks and ripe experience. This privilege I will cherish as long as memory serves.

I desire to digress for a moment here to tell of a visit to our meeting of April, 1880, by Capt. J. W. Kitchell, our fellow townsman and benefactor who gave a demonstration with his microscope, showing slides of the different tissues of the body. At that day this was a treat to many of the members as most of them had had but little training with the microscope farther than to see the circulation of the blood in the frog's foot and the chlorophyll bodies in the plant leaf.

We had many good and instructive paper from the best physicians in the district. There was not much mincing matters, either in the text or the discussions, and a spade was called a spade regardless of whose toes got in the way. I well remember our late lamented Dr. Amos Sawyer, whose well-written papers showed much thought and careful study and were not only sought for by the medical magazines of our own country but in foreign lands as well. I have a vivid recollection of a paper he read at a meeting of this society on the treatment of diphtheria. This was before the days of antitoxin. A specialist from a distant city whispered to me to ask about the use of sulpho-calcine. Not having had any experience in the use of this remedy, I hesitated, knowing Dr. Sawyer to be a package of dynamite, liable to explode any minute and always loaded for a big game and besides I had heard of the men who got rich by attending to his own business, so I passed the buck, using a modern term for keeping off the grass.

As Dr. Sawyer read on rapidly, as was his custom, driving his arguments home with a dynamic force peculiarly his own, our specialist shot the question straight at him. After registering a withering look of pity at the other's ignorance and giving it time to soak in, Dr. Sawyer quietly remarked: "Sulpho—Hell and damnation, I've tried it and it's not worth a damn," and went on

reading his paper. There was no reference to sulpho-calcine in the discussion.

Many of these old-timers were wise beyond their time. Their work often led them into unbeaten paths where it was necessary to exercise strong individuality, have a clear head and a steady hand. They were often thrown on their own resources and sailed uncharted seas. Hospitals were few and far between. Clinics were almost unknown and professional knowledge was gained largely by observation. They were necessarily what might be termed "all round men," and while not knowing all about any particular disease, they had a working knowledge regarding the prevalent diseases and a pretty clear idea about the application of remedies.

I recall a statement made by a celebrated internal medicine man some years ago to his class, in which he said that if he should be attacked on the morrow with any of the ordinary ailments to which flesh is heir, he would choose for his attendant some good old family physician who had kept abreast of the times rather than a specialist.

We have no desire whatever to disparage the younger physicians of today or say aught against the specialists who are doing excellent work in their several lines of specialism. The time has arrived when the whole burden is too much for any one man to carry alone, hence the necessity of dividing the work that better results may be obtained and humanity thereby be benefited.

We kindly ask you to not forget the old time members of the craft who blazed the way and laid the foundation of an honorable and dignified profession that you might profit thereby.

TRUE ELEGANCE

"What a topping get-up!"

"Do you like it?"

"Oh, my dear, I simply love it. It's just too hideously fashionable for words!"

—*Bystander* (London).

A MASTERFUL MALE

"So you let your husband carry a latch-key?"

"Oh, just to humor him. He likes to show it to his friends to let them see how independent he is—but it doesn't fit the door!"

—*The Passing Show* (London).

PROBABLY GAVE IT A WEIGH

"All my life I've been unfortunate—when still a child, I was left an orphan!"

"What did you do with it?"—*Purple Cow*,

Correspondence

CLINICAL LECTURES

Adrian, Illinois,

June 15, 1926.

To the Editor:

The physicians who attended the clinical lectures at the Champaign meeting should express their appreciation of them. These demonstrations should be made a prominent feature of every state meeting. They should be conducted by men of outstanding ability. It is not an accumulation of interesting cases, nor a man who can bring out all the details of them, but a real teacher who can visualize the facts so that all of us can use them, that makes the procedure worth while. The Tri-State Medical Society has made itself a power in this valuable work.

The medical fraternity of Moline and the Tri-Cities, acting with the program committee of the state society, have a great opportunity to demonstrate that a downstate city or a group of them can put through such a meeting. Probably the medical department of the state university at Iowa City would be glad to co-operate. I believe that many of us would like to go to Iowa City for a day or two if the university authorities wish to have us do so.

Illinois is fortunate that it has within easy reach two medical centers of the first rank—Chicago and St. Louis. In one year the state society meeting might be held in Chicago or a nearby city (Joliet has asked for it in 1928), with a program and business meetings about as they usually are. If, in addition, from Monday morning till Saturday evening, except when the regular meetings were in session, clinics were held by men who are masters in their particular field, who are in the forefront of medical knowledge, I believe it would attract as many more doctors as those who now attend. It would become the head of a post-graduate instruction, which would more readily extend to the component societies. If men who have become proficient in a special treatment and who have nothing to sell but their knowledge would demonstrate the newer forms of apparatus, such as the electrocardiograph, diathermic and other means of physical therapy,

most of us would be more impressed, and probably the reputable manufacturers would sell more. The younger doctors who have their reputation to make might well undertake this service.

If, in the next twenty years, the Illinois State Society would aid to develop and disseminate a knowledge of cardio-vascular diseases, as has been done of tuberculosis since 1900, it could do no better work.

In another year, the clinical program might be held in St. Louis. This would be as convenient to the doctors of the southern part of the state as Chicago is for Northern Illinois. The regular meetings of the society probably should be held in Illinois, which could be done in East St. Louis, Alton or Belleville.

At another time, Peoria and Bloomington might combine to furnish an excellent meeting.

The county society program might well be partly clinical. Most of us remember ideas better if we have a material peg on which to hang them. Some cases might be made a proper source of revenue to the society. The county society treasury is usually as bare as that of a village church. Clear and satisfactory cases should not be exploited. But when the medical attendant is in doubt and wishes assistance, a consultation with all the members of the society should be as satisfactory as with one of them. The local doctors should give their work and opinions without charge and an ordinary consultation fee be paid to the society. If a number of similar cases were grouped at the same time and an expert brought from a distance, he could go home with something more than thank you and an expense pitance.

I do not present these ideas because they are new or have never been thought of by the leaders of the state society, but because they are not being used, perhaps because these officials do not know the feelings of the majority of the profession. If these opinions are individual, they are of little value; if they represent similar opinions by several thousand of the rank and file of the doctors of the state, they deserve earnest consideration and investigation.

Yours truly,

A. M. SHAW, M. D.

PERIODICAL EXAMINATION OF APPARENTLY WELL PERSONS AT HOSPITAL RATHER THAN BY THE ORDINARY PRACTITIONER

Silvis, Ill., June 15, 1926.

To the Editor:

Was your attention invited or drawn to the statement "Prevention of disease depends largely on the periodical examination of apparently well persons at thoroughly equipped hospitals *rather than by the ordinary practitioner?*" It is Dr. Louis B. Wilson, Director of the Mayo Foundation for research and medical education, speaking to the closing session of the recent Congress on medical education, licensure, and hospitals. If a practitioner-health-officer fight is to be split to add a third large-clinic angle *where the public can see it* then we would better hide lay-education efforts until we get it worked out. We cannot make people believe we are nice if we are not.

WM. D. CHAPMAN.

THE MATERNITY BILL HAS NEVER DONE ANY GOOD TO HUMAN BEINGS EXCEPT INDIVIDUALS WHO HAVE DRAWN SALARIES UNDER IT, SAYS SENATOR REED

Silvis, Ill., June 1, 1926.

To the Editor: The enclosed clipping from the *Chicago Tribune* probably is not news to you but you will permit me to celebrate a trifle by passing it on. It means "that's all" for this bill, doesn't it? Having achieved 1st place on the calendar once, no bill would be expected to get it again I'd think.

Next move must be to tack on an amendment to some appropriations bill that's slated to go through. Is that right? Twenty times I've threatened to write Reed an applause card; think I'll do it now.

WM. D. CHAPMAN.

The following is the *Tribune* article alluded to:

LONE FILIBUSTER OF REED BLOCKS LAW'S EXTENSION

PREVENTS THE RETENTION OF MATERNITY ACT
(*Chicago Tribune* Press Service.)

Washington, D. C., June 15.—Special.—Action on the bill extending the life of the maternity and infancy law was blocked today by Senator Reed (Dem., Mo.).

The senate during the morning business hour voted to take up the bill. Senator Reed, however, who opposed extension of the law, talked until 2 o'clock when the farm bill automatically became the business before the senate.

OPPOSES ANY EXTENSION

The house bill provided for the extension of the maternity and infancy act, originally intended to continue for five years, for an additional two years. As amended by the senate committee on education and labor, it would be extended for only one additional year. Senator Reed opposed any extension at all.

"This bill, in my opinion, has never saved a human life and never done any good to a human being except individuals who have drawn salaries under it," said Senator Reed, who described the act as "a monstrous proposition to interfere with the motherhood of America."

FURTHER FALLACIES OF THE SHEPPARD-TOWNER PROPAGANDA

WILLIAM C. WOODWARD

Executive Secretary, Bureau of Legal Medicine and Legislation of the American Medical Association.

CHICAGO

1. In support of pending legislation to authorize appropriations to carry the Sheppard-Towner Act into effect for two years beyond the date originally set for it to expire, it is urged that this is merely a temporary expedient, designed to prevent the loss of the money and effort already expended under the Act. The record shows, however, that is not the case. The extension of the Sheppard-Towner Act now sought, for two years only, is merely one of a series of extensions that will be sought if this extension be granted. In fact, proponents of the Sheppard-Towner plan regard the Act as permanent legislation.

In the report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, January 14, 1926, on H. R. 7555, the bill authorizing further appropriations for carrying the Sheppard-Towner Act into effect, on page 51, we find the following statement by Miss Grace Abbott, Chief of the Children's Bureau:

"The committee is familiar with the fact that the legislation enacted in the maternity and infancy act is permanent; the only thing that is not permanent is the authorized appropriation for the five-year period."

In the Congressional Record, April 5, 1926, page 6725, the same view was stated by Representative Barkley, when he spoke in support of the bill:

"My only regret is that this authorization is limited to two years. I would advise gentlemen of the fact that this is permanent legislation. The Sheppard-Towner bill is a permanent law. It only provided originally for a five-year authorization of appropriations. This merely extends the authorization two years, but the law itself is permanent law. . . ."

The same view was adopted by Senator Sheppard, in the Congressional Record, April 14, 1926, page 7254:

"As to the present status of the measure, let me

add that, after consultation with the Budget Bureau and the President, the Secretary of Labor transmitted to Congress a recommendation for the continuation of the appropriations under the maternity act for two additional years. The act itself is permanent legislation."

It could not well be made clearer that the proponents of this legislation expect to keep the Sheppard-Towner plan as a permanent part of our Federal organization. But whether they do or do not plan to go that far, it is clear that they have no intention whatsoever of abandoning the scheme at the end of the two-year extension they now seek. For turning to the printed report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, we find the following:

"Mr. Newton. Now this further question. Do you consider that the two years is sufficient?

"Miss Abbott. Well, I do not consider it sufficient if it is to end at the two-year period. I did not think in asking that period of time that that was the intention either of the Secretary of (or) the President that there was to be no further extension after the two-year period." Page 12.

"Mr. Lea. What time would you specify for a certainty that, in your judgment, the United States should remain in this work?

"Miss Abbott. Well, I do not want to specify for a certainty.

"Mr. Lea. Do you think four years?

"Miss Abbott. No; I would rather say five as the time that the Government would without question need to continue the work.

"Mr. Lea. You are certain that the Government should stay in for five years?

"Miss Abbott. Personally, I am; yes. But I am supporting the recommendation of the Secretary and the President for the two-year period, with a view to showing accomplishments and needs still existing at the end of that time." Page 14.

"Mr. Rayburn. You would not hazard an opinion on just when you think you could recommend that the Government go out of this supervision?

"Miss Abbott. No; because I think it is a factual thing. I am not a prophet, after all, as to when that condition may come to pass." Page 15.

With such testimony as that of Miss Abbott, the statement that has been made in support of the pending bill, that "there is no disposition to extend Federal cooperation beyond the next one or two years," is certainly without foundation.

2. Attempts to justify an extension of the life of the Sheppard-Towner Act by showing the extent of the activities in the field of maternal and infant hygiene since that act was passed are inadequate unless they show the results of such activities, and this they do not do.

"Child-health conferences," "school conferences," "infant clinics," "institutes," "public talks," "patterns distributed," "milk letters, with instructions to moth-

ers," and similar activities (Congressional Record, April 14, 1926, pages 7254-7272) are at best merely agencies to conserve health and life. Evidence showing only that such activities are going on does not prove that they are accomplishing that result. Such evidence is even further from proving that such activities are being conducted efficiently and economically, or that they are being conducted under the Sheppard-Towner Act better than they could have been conducted by the states alone. The evidence offered is inadequate, too, to permit intelligent judgment as to the relation of such activities to the Sheppard-Towner Act, for such evidence very generally fails to show the nature and extent of similar activities in the same jurisdiction before the act was passed.

3. The assertions that have been made that there have been substantial reductions in infant and maternal mortality, with the implication that such reductions have been due to the Sheppard-Towner Act, are not supported by the evidence.

In the Congressional Record, April 5, 1926, on page 6720, in the argument of Representative Newton in support of the Act, the following appears:

"Since the operation of this act there has been a substantial decrease in both the infant mortality and the maternity death rates."

Representative Newton then submits tables showing that in the three Sheppard-Towner years, 1922-1924, inclusive, the infant mortality rate for the registration area fell from 76 to 72, and the maternal mortality rate fell from 6.8 to 6.6. Such a decline could hardly be regarded as "substantial." But even if it were, it could not be accepted as an argument in favor of the Sheppard-Towner Act; for during the three years immediately preceding, namely, 1919-1921, inclusive, the infant mortality rate fell from 101 to 76, and the maternal mortality rate fell from 9.2 to 6.8. Of course, we know that the improvement shown by the figures last stated was only relative and that the decline was great because of the high mortality due to influenza in the year preceding the triennium named and from which the decline is computed. But what the improvement in 1922-1924 was due to, and how long it will continue, we do not know.

As a fallacious argument offered in support of the Sheppard-Towner bill recently passed by the House, we find the following by Representative Barkley, in the Congressional Record, April 5, 1926, page 6725:

"Taking the United States as a whole, in 1920, which was the year before the enactment of this law, the number of children who died in infancy amounted to 86 out of every 1,000 in the United States. In 1924, four years after the passage of this law, the death rate among children in the United States had been reduced from 86 to 71 per 1,000. This is a reduction of nearly 20 per cent in less than four years."

The Sheppard-Towner Act was not approved until Nov. 23, 1921. Obviously, its enactment could not have influenced the infant mortality rate for 1921. Why, then, did not Representative Barkley take the infant mortality rate for 1921 as a basis for comparison, instead of the infant mortality rate for 1920? The

infant mortality rate for 1921 was 76. The decline, therefore, under the Sheppard-Towner regime was from 76 to 72. It was only 5 per cent in three years, not 20 per cent in less than four years as stated. And no evidence is offered to show that the Sheppard-Towner Act had anything to do with even such decline as did occur.

4. Statements made to show the extent to which infant and maternal mortality are preventable, in support of an argument for the enactment of the pending legislation, are without adequate foundation.

In the Congressional Record, March 31, 1926, page 6434, Senator Sheppard is quoted as referring to certain studies and investigations made by the Children's Bureau as follows:

"It was found that nearly 20,000 mothers and almost 200,000 infants under 1 year of age were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy."

As a matter of fact, according to the Twenty-fourth Annual Report of the Bureau of the Census, covering Mortality Statistics, 1923, published in 1926, page 126, there were in the entire registration area of the United States in 1923, only 166,274 deaths of children less than one year old, from all causes. The estimated population of the registration area was 96,986,371, and the estimated population of the entire continental United States was only 110,663,502. (See Report cited, page 8.) And yet, unless Senator Sheppard has misinformed us, investigations by the Children's Bureau disclosed the fact that almost 200,000 infants under one year of age die in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy. If the reported findings of the Children's Bureau are correct, where do the extra 34,000 babies come from each year, who die from lack of proper knowledge? And where do all the babies come from who die every year from other causes?

A similar discrepancy exists with respect to maternal mortality. In support of the Sheppard-Towner Act, the Children's Bureau is quoted as authority for the statement that "nearly 20,000 mothers . . . were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy." And yet the Report of the Census Bureau, cited above, page 176, shows that the total number of deaths in 1923 in the entire registration area, containing nearly nine-tenths of the population of the continental United States, from accidents of pregnancy and labor, and hemorrhage, blood poisoning and other conditions incident to the puerperal state, was only 15,505.

5. Comparisons between maternal mortality in the United States and maternal mortality in other countries, to the discredit of the United States, are not justified by comparable records.

Referring to studies and investigations made by the Children's Bureau, Senator Sheppard, according to the Congressional Record, March 31, 1926, page 6434, said:

"Reports from the birth-registration area of the United States showed that from 1915 to 1920 the death

rate of mothers from causes relating to maternity was increasing. It was shown that the death rate of mothers in the United States from these causes was the highest for any nation in the world for which recent figures could be obtained, and that seven foreign countries had infant death rates lower than the United States."

The reason for the increase in maternal mortality in 1920 as compared with maternal mortality in 1915 is not hard to find. In 1920 many expectant mothers died from influenza, and their deaths were charged to pregnancy; in 1915, influenza did not contribute to such mortality.

But probably the most overworked figures that have been used in the support of the Sheppard-Towner propaganda are such as those referred to above, purporting to show an exceedingly high maternal mortality rate in the United States as compared with the maternal mortality rates in other countries. Concerning comparisons of that kind, the Bureau of the Census has this to say:

"As already pointed out, the classification of deaths from puerperal causes differs greatly in different countries. Higher rates in one country than in another, therefore, do not necessarily mean higher mortality from these causes. However, as classification in a given country presumably differs but little from year to year, the rates do presumably serve as useful measures of mortality from these causes within the country itself.

"Comparing the rates of 1923 with those of 1915, for puerperal septicemia, the United States shows the same rate for both years, England and Wales a reduction of 13.3 per cent in its rate, Australia an increase of 30.8 per cent, New Zealand an increase of 137.5 per cent, and Scotland the same rate for both years. For other puerperal causes, the United States shows an increase of 5.4 per cent; England and Wales a decrease of 7.4 percent; Australia an increase of 17.2 per cent; New Zealand a decrease of 15.4 per cent; and Scotland an increase of 7.1 per cent." Twenty-fourth Annual Report, Bureau of the Census, Mortality Statistics, 1923, published in 1926, page 64.

Just what comfort Sheppard-Towner propagandists can get out of these figures is hard to see.

6. Even if it could be admitted that infant and maternal mortality rates were as bad as the proponents of the pending legislation assert, and that it is as easily reducible as some of them claim, there is no evidence to show that preventive measures can be applied more effectively by the Federal Government than by the State.

So far as is known, not a single advance in methods for preventing infant and maternal mortality has been made by the Children's Bureau since the Sheppard-Towner Act was passed. It has merely adopted methods devised and in use by the several states and cities of the country. Obviously, supervision and control of such activities over the entire land area of the United States, approximately 3,000,000 square miles by a federal bureau in Washington, must entail a

heavy overhead expense—or must be supervision and control on paper only.

THE CONTROL OF VOLUNTEER LAY HEALTH ORGANIZATIONS

Bloomington, Ill., May 27, 1926.

To the Editor: I am enclosing a copy of a report made by the Committee of the Salt Lake City Medical Society that I feel to be of interest from the standpoint of the control of volunteer lay health organizations. The fact that almost one-half of the inhabitants of the State of Utah live in Salt Lake City and the small population of their state makes the pernicious influence of uncontrolled volunteer lay health organizations more obvious.

The medical officers of the Utah State Public Health Association are in close harmony with the State Medical Association. In fact, the policies of that department are entirely controlled by the State Medical Society.

Yours truly,

E. P. SLOAN.

The following is the Utah plan:

TO THE OFFICERS AND MEMBERS OF THE SALT LAKE CITY COUNTY MEDICAL SOCIETY:

We, your Committee on Public Health and Legislation, desire to submit the following report:

On December 20, 1925, we received the following communication:

SALT LAKE COUNTY MEDICAL SOCIETY

December 19, 1925.

Dr. Sol G. Kahn,
Boston Building,
Salt Lake City, Utah.

Dear Doctor Kahn:

President F. H. Raley of the Salt Lake County Medical Society has appointed you Chairman of the Committee on Public Health and Legislation. The other members of your committee are C. M. Benedict and John Z. Brown.

At the last meeting of the Salt Lake County Medical Society, the enclosed resolution was adopted and the society voted that your committee investigate organizations in this county which may be covered by the resolution and to report to the society at an early date.

Respectfully,

(Signed) M. M. CRITCHLOW,
Secretary.

UTAH PUBLIC HEALTH ASSOCIATION

Affiliated with the
NATIONAL TUBERCULOSIS ASSOCIATION
Salt Lake City, Utah

December 18th, 1925.

Dr. F. H. Raley, President,
Salt Lake County Medical Society,
Boston Bldg., Salt Lake City, Utah.

My dear Doctor:

The Executive Committee of the Utah Public Health Association, at its meeting on December 17th, by resolution, directed me to state to you that it would gladly welcome an investigation of its affairs by your organization, and for that purpose appointed the following committee to meet a similar committee to be appointed by you: Dr. H. G. Merrill, Chairman; Dr. L. E. Viko, Dr. Heber J. Sears.

We are anxious that this investigation be held with as little delay as possible.

Thanking you for your kind consideration, and awaiting your reply,

Very sincerely,

(Signed) GEORGE D. KEYSER, Pres.

On January 10, 1926, your committee together with the committee of the Utah Public Health Association, and Mr. James H. Wallis, Secretary of the Utah Public Health Association, met at the office of the chairman. Dr. H. G. Merrill, Heber J. Sears, L. E. Vike, and Mr. James H. Wallis, each one in turn, explained to us the objects and workings, in detail, of the Association, both in Salt Lake City and the State of Utah. At that meeting we had a stenographer present who took notes and a transcribed copy of the minutes was given to Dr. T. B. Beatty, Secretary of the State Board of Health, who was requested to report in writing his explanation of the statements made and anything else he felt the committee should know.

On January 24th we met with Mr. George D. Keyser, President of the Utah Public Health Association, with whom we discussed the subject in general and were invited to confer with Mr. Keyser and the Secretary of the Utah Public Health Association at the Association's office in the Capitol Building at 7:30 p. m. on January 25th. At that conference we met Dr. Herbert R. Edwards, Medical Field Secretary of the National Tuberculosis Association, who informed us that he was here for the purpose of investigating the Utah Public Health Association and also to map out a five-year program for the Association. Mr. Keyser and his secretary were very courteous and showed us books, checks, vouchers, with all reports, and in every way assisted us in learning the details of the Association. We are not public accountants, neither are we expert bookkeepers, but we learned enough to satisfy ourselves that the finances of the Association are being well guarded at this time and that no money can be spent without checks being countersigned by Mr. Keyser, who introduced a budget system in June, 1925, since which time advertising for bids for any and all supplies has been required.

From our examination and the knowledge we have gained since beginning this investigation, we feel convinced that every one connected in any manner with the Utah Public Health Association is enthusiastic, and active in his work.

The further we went in this examination the more we learned that our work could not be confined to Salt Lake County but that it necessitated our taking in the State of Utah, together with information to be obtained from the entire United States.

On January 28th, we prepared the following letter and sent it out to forty physicians living in Utah, excluding Logan, Ogden, Sale Lake and Provo:

January 28th, 1926.

McIntyre Building,
Salt Lake City, Utah.

Dear Doctor:

We have been appointed a committee of three by the Salt Lake County Medical Society to investigate the work of the Utah Public Health Association and we are writing to ask your opinion as to their activities as well as other public health movements in your locality.

Dr. Edwards of the National Tuberculosis Association is now in Salt Lake City making a survey of health conditions in Utah with the idea of recommending a five-year program for the Utah Public Health Association.

What is the attitude of your community toward the Public Health lectures as given by Mr. Wallis and Mr. Parker of the Utah Public Health Association?

We enclose a self-addressed stamped envelope and ask you to kindly give us on the reverse side of this sheet any information that you may have to offer.

Fraternally yours,

SOL. G. KAHN, Chairman,
JOHN Z. BROWN, M. D.,
C. M. BENEDICT, M. D., Secy.

From the replies received we learned that there was much chaos and misunderstanding between physicians and the public in reference to public health lectures and work in our state. We learned that the secretary of the State Board of Health, the Utah Public Health Association, the Utah Agricultural College, C. N. Jensen, State Superintendent of Public Instruction, and many others, were very active in teaching or attempting to teach health to the public. In order to ascertain how much of this work was being performed by other organized agencies of the State of Utah besides the Utah State Board of Health, we prepared the following letter, a copy of which was sent to each of the following gentlemen: C. N. Jensen, State Superintendent of Public Instruction; Dr. George Thomas, President of the University of Utah; and Dr. E. G. Peterson, President of the Utah Agricultural College:

February 1, 1926.

Dear Sir:

We are a committee appointed by the Salt Lake County Medical Society on Public Health and Legislation. Our work on this committee has carried us a

little further than simply the confines of Salt Lake County.

We ask you to kindly advise us what public health work is being performed through any departments controlled by you, such as Extension Work, Home nursing, and any other volunteer health matters.

We thank you in advance for any and all information supplied.

Enclosed is stamped addressed envelope for your reply.

Very truly yours,
(Signed)

SOL. G. KAHN, Chairman.
JOHN Z. BROWN.
C. M. BENEDICT.

The reply which we received from the Utah Agricultural College signed "Vera Carlson, Secretary to the President," stated:

"The health program as conducted by the Extension Service is directed at the building of positive health in the family group through proper food, clothing, sanitation, mental attitude and recreation. Their work takes nothing of the clinic, diagnostic and curative phases. They follow closely outlines as given by the National Women's Foundation for Health and use the publications of the United States Department of Agriculture in its national extensive program."

From letters received by the committee we are reliably informed that the Utah Agricultural College has nurses in the field doing public health work, not under the supervision of the State Board of Health.

The taxpayers of the State are groaning under the heavy burden which they carry. The committee fails to see why the Agricultural College does not confine itself to its own peculiar problems as an agricultural college and leave the problems of public health to the regularly constituted health department of the state, which would distribute all publications of the U. S. Department of Agriculture or any other U. S. Functionary pertaining to public health.

Superintendent C. N. Jensen in his reply to our letter stated that the following resolution had been passed by the Utah State Board of Education.

"That the public schools of the State place greater emphasis on health education and that wherever possible boards of education employ school nurses."

He further stated that—

"Districts which employ nurses are receiving much needed help; districts which are not employing nurses, through lack of funds or otherwise, are being deprived of that aid which would make much more effective the health work of their schools."

Your committee recommends for your consideration that these nurses be selected only on the approval of and be directed in cooperation with the State Board of Health.

Dr. George Thomas, President of the University of Utah, in his reply, stated:

"Since June, 1925, we have not done any regular state Health work. We thought for the time being it was better to take the money devoted to public health and strengthen up our medical school."

About three years ago Dr. Thomas appeared before the profession and asked for their assistance and support. The President of the Utah State Medical Association appointed a committee known as "The Advisory Committee" to the Medical Department, University of Utah, and the succeeding presidents have continued this committee. From this contact, Dr. Thomas acquired a better knowledge of the medical viewpoint and their reason for opposing the Volunteer Health Work which was being carried out by the Extension Department of the University of Utah. The Committee desires at this time to commend Dr. Thomas for his efforts and cooperation and bespeak for him its continued support.

The Utah Public Health Association has four nurses in the field who are stationed at specified places and give health instruction. They receive their salary from three combined sources: The Utah Public Health Association, the local school board, and County Commissioners, each paying one-third. The Utah Public Health Association directs the work.

The Utah Public Health Association has a secretary who receives a salary of \$3,000 a year and expenses when in the field, also a man who drives the truck, shows moving pictures and gives lectures and who receives a salary of \$1,500 annually and expenses. The Secretary is in the field a large part of his time. The man who drives the truck and shows the moving pictures is in the field practically all of the time. They have a secretary and an assistant in the office at the Capitol and the four part-time school nurses in the field.

The Utah Public Health Association does not confine its work to Tuberculosis, but gives instruction, so they state, in general health matters. They distribute pamphlets and literature on the subject to school children, distribute cards which are known as "The Modern Health Crusade" and give them general advice. The children report at regular stated intervals to show they have carried out these instructions. The brushing of teeth is stressed and they are scored according to replies made to questions, and are given honorable mention in public according to merits.

From the February issue of "CALIFORNIA & WESTERN MEDICINE" under the caption "With the Editor," we glean the following:

"One tooth brush to each three persons (35,000,000) was sold in the United States last year. Allowing for the reasonable allotment of three brushes a year, it would seem that at most some ten per cent of our people use tooth brushes."

"Aside from the question of the health virtues of the tooth brush, the fact that all the active propaganda almost every agency of society could put forth induced only 10 per cent of the population to practice a cheap, simple habit of cleanliness, makes one wonder about the effectiveness of much of the health education just now so popular."

From our conversations with Dr. Edwards and from many letters which we had written to friends of ours in an attempt to ascertain the situation in other states with reference to volunteer public health association,

we prepared and sent out the two following letters to ten different states:

(1) To the Secretary of the State Board of Health:

Dear Secretary:

As a committee appointed by the Salt Lake County Medical Society to inquire into the activities of the Utah Public Health Association which is affiliated with the National Tuberculosis Association, we are writing to inquire of you as secretary concerning the activities of the State Branch with particular reference to its work in your State, the extent of its activities and of its relationship with your State Health Department.

Assuring you of our appreciation of any information you may be in a position to supply, we remain
(Signed by the committee.)

(2) To Secretaries of Tuberculosis Association:

We have been appointed a committee by the Salt Lake County Medical Society to investigate the work of the Utah Public Health Association, which is an affiliation of the National Tuberculosis Association.

We are writing to inquire concerning the activities of your State Branch of the National Tuberculosis Association with particular reference to its work, the popularity of its activities, and if their cooperation with your Department is satisfactory to all concerned.

If not, will you kindly give in detail your opinion of the conditions responsible for the situation?

Assuring you of our appreciation of any and all information you may be in a position to supply, we remain

(Signed by committee.)

From the replies received to our letters addressed to the Secretaries of the State Boards of Health and Secretaries of Tuberculosis Associations, we find that in some states there is complete cooperation. In certain instances the Secretary of the State Board of Health is also the Secretary or at the head of their State Tuberculosis or Public Health Association, resulting in complete harmony. In many other states this cooperation and harmony does not exist.

Dr. S. W. Welch, State Health Officer of the State of Alabama (reprint No. 981 from the U. S. Public Health Reports, December 26th, 1924) says:

"It has too often been the case that an unofficial agency has set up for itself a program, with the money in hand to finance the project, and the workers in the field have been sent to the official agency of health to solicit its endorsement and its cooperation. The idea is apparently that the private agency is entitled to the privilege of setting up a program to suit itself and demanding assistance from the official health agency in carrying it out. It should be definitely understood and stated that if any organization is in a position to devote its attention to assisting another agency in carrying on its work it is the voluntary organization, while the official agency is decidedly not justified in subordinating its official program to the requirements of one that is unofficial."

Along the same line United States Senator Royal S.

Copeland, M. D., formerly Commissioner of Health, New York City, states:

"The duty of protecting the public health is the particular *business of governmental or official* health agencies.

He further states:

"Any agency that assumes to conduct community health service which should properly be performed by an official health body, is guilty—though it may not be conscious of it—of an unofficial act, unless incompetence, indifference or poverty of a community government make it imperative for citizens to take up arms for their own protection. If officials will not or cannot perform functions which are properly theirs, it is not the business of private groups to supplant them, but to bend their efforts to the instruction or reform of such officials, or to the procurement of moral and financial support to establish or strengthen the health organization of such official bodies. Private groups which seek to serve as substitute for official agencies, do little except to produce demoralization and to delay the establishment of good and efficient government.

SHOULD BE SUPPLEMENTARY

"Private organizations interested in public health activities should be the closest allies and warmest supporters of official health bodies. Unfortunately, this natural relationship is frequently conspicuous in its absence. . . . The voluntary agency should not replace or supplant the official health body. In direct proportion as voluntary measures are successful in stimulating health officials to the performance of their duty, or in creating public understanding and sympathy and in helping to secure adequate funds for the conduct of public health work, they will have lessened the need and excuse for the continued existence of parallel bodies. . . .

"It is alleged that a few voluntary agencies that have grown greatly in social and financial power have not stopped short even of attempting to impose their judgment and decisions as to objectives, methods of procedure, and the conduct of health services upon official health agencies. This has resulted quite naturally in bitterness and in conflicts.

A PARALLEL CASE

"An analogy may serve to show the fallacy of the present methods of such private health agencies. Let us assume that in a community whose police department renders inefficient or insufficient service, a private association has undertaken to remedy the situation by organizing and maintaining a private police service for the community as a whole. Obviously this would be a most demoralizing, undemocratic and subversive form of private service. Good citizenship requires that the best elements should unite for the creating of a public sentiment that would compel the correction of the defects or evils that may characterize an inefficient governmental police department; or such public sentiment should aim to secure adequate financial support to make the existing police department efficient. A private police service would inevitably cause dupli-

cation of work. The resulting confusion and conflict would cause a delay in the correction of the evils or deficiencies in the public service and would aggravate and intrench such evils or defects. Moreover, lacking the authority to assume the police power, it would weaken the authority and dignity of the governmental agency.

"The community would not suffer from the termination of some of the private agencies that concentrate their efforts upon the special activities designed to stimulate a flow of public contributions to their own organizations. The contrary would be the case, for sound civic policy dictates the preservation and enhancement of official governmental agencies. Private health organizations could with great benefit to all devote their enthusiasm and energy to the support of the official bodies. Financial support by the public of philanthropic institutions is necessary and commendable; but the financial support of private health agencies is of very questionable value, since it inevitably tends to convert such agencies into groups that are zealous to compete in the exercise of functions which, should civic policy and the general welfare demand, should be performed by the official health organization.

"In conclusion, I would say that there is sufficient opportunity for service by private health agencies in the fields which I have prescribed. If they will accept this limitation, there is glory enough to go around and, what is more important, the public service and welfare will be greatly benefited."

The following is quoted from "The Official and Non-Official Agency" by Linsly R. Williams, Managing Director, National Tuberculosis Association, New York City, with which, as before stated, the Utah Public Health Association is affiliated:

"The executive office of the National Tuberculosis Association believes that the official health agencies should be responsible for the maintenance of all public health activities which naturally include tuberculosis. The demand for such public health and tuberculosis activities on the part of the people is frequently brought about by the voluntary tuberculosis association, and this association should welcome the opportunity of transferring voluntary activities to the official agency even though this should necessitate a rearrangement or modification of the program of the voluntary agency."

In the JOURNAL, A. M. A., February 20, 1926, page 562, Dr. Williams announced February 12, 1926:

. . . " . . . that the recent sale of Christmas Seals totaled \$4,750,000. The anti-tuberculosis campaign this year will *emphasize closer cooperation between voluntary tuberculosis agencies and official agencies*. The annual business meeting of the state secretaries, at which this announcement was made, was held in Chicago."

From Dr. Williams' own statement herein contained you will notice that cooperation between voluntary Tuberculosis agencies and official agencies does not exist to the saturation point or to the point desired by Dr. Williams.

In three counties the State Board of Health has established a so-called health unit. These health units consist of a full-time Health Officer, a full-time Public Health Nurse, and in one county a staff of inspectors. If one city or county cannot encompass the financial part, the State Health Commissioner endeavors to combine two or more. If it is a question of finances, assistance is procured from the International Health Board, a branch of the Rockefeller Foundation.

From the replies received from the Physicians in Utah we learned that the name "Utah Public Health Association" causes much confusion. The name simulated "Utah Board of Health" so closely that members of the medical profession do not appear to know the difference when one or the other is in the field. One of our committee has criticised the State Board of Health for not having a special uniform for all of their assistants, thus making it possible for people to recognize when organized health authorities of the State are in their midst and distinguish them from volunteer organizations.

Any person who has held a public office for a period of years has made political enemies, for the reason that if any one has a pet idea and the official does not fall in with the idea, it is thought that he does not understand his business, and the Secretary of the State Board of Health is no exception to the rule.

The committee has had a number of meetings with our State Health Commissioner and thus received intimate knowledge of the present objects and aims of the State Board of Health. We feel that if the members of our profession should become better acquainted with the workings of the State Board of Health the result will be with all of you as it has been with us, they would be more whole-heartedly supported for they are doing a fine work. As it is they are being hampered at every turn by one or the other of these voluntary health organizations. It appears from our investigation that there is some complaint or friction in the contact between voluntary organizations and the State Board of Health. We are not inclined to pass upon the merit of such complaints. If, as a matter of fact, there be friction, it could probably be eliminated by having the contact work carried on by committees representing the voluntary organizations on the one hand and the State Board of Health on the other.

The Utah Public Health Association states that its work is entirely educational. It is very difficult to measure the results of such work, just as it is difficult for a firm to measure how much benefit they derive from a particular piece of advertising. The Association collects annually upwards to twenty thousand dollars in Utah. On two occasions they collected twenty-seven thousand dollars. This money is, as far as we can learn, spent each year. A public accountant might segregate the expenses and show how much in his opinion is overhead and how much is for seals, how much for other expenses, but to us it appears from our way of figuring that it is all overhead. They spend all they collect each year.

In 1923 Governor Mabey appointed an impartial committee to investigate health activities in the State of Utah. This committee was made up of Lincoln G. Kelly, a certified public accountant; former State Senator Carl A. Badger; and Dr. B. W. Black of the U. S. Veterans Bureau. After making a thorough investigation of these conditions, under date of February 7th, 1923, they made the following recommendations:

1. "That all public health activities now being performed by the Department of Agriculture be placed under the direct administration of the State Board of Health.
2. While it is clearly the function of the State Board of Education to provide for the instruction of health education to children of school age, it is felt that the maintenance and preserving of the health of the child and the responsibility for health conditions in the schools should rest with the State Board of Health, as now provided by law.
3. All public health activities undertaken by the State University and the Utah Agricultural College should be undertaken only upon approval in cooperation with the State Board of Health, and if necessary provide for this approval, legislation should be enacted to cover same.
4. All volunteer organizations, whose activities are devoted to public health work, should function in cooperation with or under the direction of the State Board of Health."

In our state, where the legislature is not in a position to appropriate sufficient funds for the carrying out of an elaborate health program such as conditions to society today require, we feel there is room for such an organization as the Utah Public Health Association.

From our correspondence your Committee feels that the money received from the sale of Christmas Seals is not expended to the best advantage to the citizens of Utah. We are of the opinion that all field work by the Utah Public Health Association as now being conducted should be discontinued and that the money being expended for field work should be used, after full discussion and cooperation with the State Board of Health, and in such manner as will do the greatest good.

We, your committee, recognize the value of volunteer health organization work and are not disposed to discourage it as such. We recommend that all voluntary health organizations in this state should be supplementary to the legally constituted State Board of Health and that they should work in cooperation with and under the direction of the State Board of Health, that the funds which they receive through the sale of seals or other sources should supplement the funds appropriated for health work by the State Legislature.

Until such time as this can be consummated, we recommend that the medical profession withhold their

moral and financial support to any and all volunteer health agencies.

SOL. G. KAHN, *Chairman.*

JOHN Z. BROWN.

C. M. BENEDICT, *Secretary.*

(The two paragraphs underscored are the ones the committee asked that the House of Delegates adopt.)

(Signed) JOHN Z. BROWN, *Chairman,*
Committee on Public Policy and Legislation.

MAKE CHIROPRACTIC AVAILABLE TO EACH DISABLED VETERAN AT GOVERNMENT EXPENSE

The following correspondence on Chiropractic methods is highly illuminating in view of the government's attempt to enter into the general practice of medicine.

May 10, 1926.

My Dear Doctor:

Two thousand Chiropractors are now working to get through Congress a law to supply Chiropractic and other non-medical services to the disabled veterans who ask for such treatment at the expense of the government.

We need YOUR help. We want you to have a part in this great humanitarian service, the accomplishment of which will place your profession upon a secure national basis.

The enclosed circular tells you exactly what to do to help. In addition to the circular instructions we are asking you to print or type at once a number of letters addressed to the following Senators; have your patients and other friends sign and mail them to the Senator addressed here in Washington. Urge in your letter the immediate passage of Senate bill 4124 which provides for Chiropractic treatment for the veterans. Each person should sign and mail five letters at least. One to each of the following:

Senators Reed Smoot, Richard Ernst, David Reed, Furnifold Simmons, Walter F. George. Address all, Washington, D. C.

If possible, get them to also mail one to each of their own Senators and Representatives. Get these letters streaming out of your community TODAY at the rate of 50 to 100 daily. You may have to do the addressing and mailing yourself; even so, man, jump at the opportunity and put this over RIGHT NOW. Circulate the petitions as well and mail them to me here. Prospects for victory are bright.

Sincerely,

GEORGE B. WEST,

P. O. Box 1652, Washington, D. C.

WASHINGTON OFFICE OF DR. LEO L. SPEARS

MAINTAINED TO PROMOTE LEGISLATION BENEFICIAL TO
DISABLED AMERICAN VETERANS

Address all Mail to GEORGE B. WEST, Post Office
Box 1652

WASHINGTON, D. C.

MAKE CHIROPRACTIC AVAILABLE TO EACH DISABLED VETERAN AT GOVERNMENT EXPENSE

The writer does not purpose herein to tell of the hundreds of veterans who have gained health through Chiropractic, nor of the deplorable conditions in the medical section of the Veterans Bureau, nor yet of the valiant fight of one great Chiropractor against all the bureaucratic power of medicine. All these stories are written readably in another place. The thing at hand is to devise ways and means to bring victory in the present fight to require the Veterans Bureau to give Chiropractic to those sick soldiers who ask for it.

The Chiropractors of the nation need a great revival of the ancient crusading spirit. The science of Chiropractic brings the greatest message to man since the Christian teachings were carried abroad by barefoot messengers. Christ brought the plan for the soul's salvation and peace. Chiropractic brings ease and rest to the distressed body.

This spirit of the Crusaders of old is needed to imbue the Chiropractic profession of today with the will to fight lustily and successfully for national recognition of the science; for the comprehensive usage of Chiropractic in combating disease and premature death in every individual's life.

The very span of life to which man should normally aspire has been maliciously misrepresented by the minions of Satan. Satan, the greatest "surgeon" and "dope shooter" of all, slices off fifty years from each normal life span. One hundred and twenty years is the age for which every man is entitled to hope if he obeys the law of God, and keeps his backbone normal. Medical science has misrepresented man's "hope of life," alleging three score and ten as the goal with the century mark as a miracle. With the spreading of Chiropractic in the last generation the average life has materially lengthened for which medicine gracefully takes all the credit. Not a single Chiropractor nor Chiropractic agency has raised a finger to gather the facts which will show that Chiropractic is largely responsible for increasing longevity, with bettered sanitary conditions accounting for the rest of the "composite" body's success in absorbing quantities of drugs and yet living longer than formerly.

For nine years the United States Government has spent an average of one-half billion dollars annually ostensibly to rehabilitate the war wrecked men. The medical science has pocketed the bulk of this aggregate of four and one-half billions. A greater number of men have died from disease since the armistice than were killed in combat on the front. Now nine years afterward, thirty thousand of these men, just yesterday the strongest, are bed bound in diseased distress.

Medical men admit that nothing can help some twenty thousand of them—the others may improve with rest and food and not too many drugs. All this time not a single Chiropractor has laid hands on one of these boys with governmental permission. **MANY HAVE BEEN SITUATED SO THAT THEY COULD TAKE CHIROPRACTIC WITHOUT GOVERNMENTAL AID—AND ARE WELL TODAY.**

These are the facts and still no protest from the combined Chiropractors. The fighting spirit of the Crusaders will change this supine attitude and prove to the world that Chiropractic can and does make private citizens well and will do the same for these veterans.

These boys went to battle in 1917 that you and I, every American citizen, could continue a life of liberty and PURSUIT of happiness without seeking permission of a Hun, self-constituted overlord. They offered to give their lives, and flinched not at the acceptance of the offer, that our homes could continue free from Hunnish violation. We have repaid them by silently permitting the Medical Hun to stand over them with a vial of drugs and the operating knife, commanding acceptance thereof though death extended clutching fingers in their acceding.

As a plain American citizen your bounden duty is to bend every effort to break this strangle hold medicine has on the lives of these sick and suffering men. To give them indeed the choice the constitution guarantees—the right to choose additional methods for regaining health when the art of medicine has failed.

As a possessor of the knowledge and confidence of Chiropractic, a mustard grain of the Crusaders' spirit will impel you to never cease firing until the Government is using Chiropractic throughout its health efforts.

The twenty-five thousand Chiropractors receiving this message can bring nationwide usage of Chiropractic in restoring to health these disabled veterans before this next June has finished its stay. Each must do his part. **WILL YOU DO YOURS?** We must all fight as a unit. If one fails, all are weakened. Hours lost are lives lost as these men are dying daily.

THERE IS NOT AN HOUR TO LOSE. If we fail this year it will be only because some of you have failed to "do your bit."

Here are the working plans:

Firstly, an effort is being made to get Royal C. Johnson to amend the Reed-Johnson Bill—H. R. 10240—to provide Chiropractic upon the request of the Veteran. Each Doctor must prepare letters addressed to his own Congressman and Senators as well as to Mr. Johnson. Have every patient sign one and mail it. Where possible get the patient to write a personal letter instead. The following form is suggested:

Congressman.....

Washington, D. C.

Millions of private citizens depend upon Chiropractic to regain and maintain their health. Many diseases yield to Chiropractic adjustments after being pronounced incurable by finest medical authority. Thou-

sands of our disabled veterans are now conceded by Bureau doctors to be beyond further help from medicine. We know that many of these men would be entirely restored to health and many other sufferers be eased if you will only provide skilled Chiropractors to treat them.

In the light of our knowledge concerning Chiropractic we implore you to so amend H. R. 10240 as to provide Chiropractic at Government expense to each disabled soldier who asks for it.

Signed.....

Secondly: Get as many statements as possible from ex-service men telling of the benefits received from Chiropractic. These should be sworn and where possible send in copies of M. D.'s statements of man's condition prior to taking Chiropractic. Many of the men have the statements made when filing their original claim with the bureau or copies of them may be obtained from the local Red Cross' files.

These statements, the following requests, and the signatures to the petitions will all be used to gain enough votes in Congress to pass our bill. Or to prevail upon President Coolidge to issue an executive order, the present law being broad enough to admit of it. These should be forwarded promptly to P. O. Box 1652, Washington, D. C.

Thirdly: When a disabled man comes to you for adjustments have him sign the following request. If he is afraid that the bureau medics will discriminate against him upon hearing of his request, mark the request confidential and none except the President will see it.

To the President of the United States and to Frank T. Hines, Director of the Veteran's Bureau:

Knowing of the value of Chiropractic in regaining health and believing that Chiropractic will help me overcome my service incurred disabilities, I hereby request permission to have Dr., a competent Chiropractor, adjust me. Such adjustments to be paid for by the Veterans Bureau.

Signed.....

Fourthly: Place in circulation immediately the following petitions. First one to be signed by all ex-service men, the second by all other citizens. Send the accumulations of names in each week and keep up the good work.

No. 1 To the President and Congress of the United States of America:

WE, THE UNDERSIGNED, know that Chiropractic is beneficial in the treatment of many diseases. We served the Nation faithfully in time of war and we are proud of that service. Many thousands of our comrades in arms are still suffering from disease contracted because of like service. We are truly sorry and surprised to know that this Nation so generous in other matters has failed to provide this proved aid to health for our buddies so badly in need of it.

In the light of our knowledge concerning Chiropractic we respectively petition that Chiropractic be

made available to all of these disabled soldiers who may ask it at the expense of the Government.

Signed.....

No. 2 To the President and Congress of the United States of America:

We, THE UNDERSIGNED, know that Chiropractic has proved beneficial in the treatment of many diseases. In the light of this knowledge we respectfully petition that the Science of Chiropractic be made immediately available to all our disabled veterans who may ask it.

We are confident, because of our experience, that thousands of these boys will be restored to health and self sustaining manhood and other thousands will have their suffering materially lessened when placed under the care of competent Chiropractors.

Signed.....

Fifthly: Draw resolutions similar to the following and present them to your city clubs and ex-service organizations. Invite your self or some other competent one to speak on these resolutions. Get them passed without delay.

To the President and Congress of the United States:

Whereas, Chiropractic is proved efficacious in the treatment of disease by the fact that one-half million people are taking adjustments today and thirty million are believers in its use, and

Whereas, The Disabled Veterans have had nine years medical treatment with two hundred thousand yet ill, and

Whereas, They have always been denied Chiropractic by the Veterans Bureau the thousands would be healed by Chiropractic adjustments, therefore:

He it resolved, that....(name of organization) ask the President and Congress of the United States of America to at once make provision to supply Chiropractic adjustments to each disabled veteran as may ask it.

Sixthly: Let each Chiropractor become an active citizen in his community. Talking with the various candidates for Congress and getting specific pledges for our legislation. Thirty Senators and all Representatives are to be elected this fall. The primaries are scant three months away. A dozen determined men can change the result in any American community where the election is between two men of nearly equal calibre. Educate the candidates as to the merits of Chiropractic. Then make it clear that your organization and your friends are going to work FOR the man who is humane and just, as demonstrated by his vote, to let these helpless, sick men have every possible chance to recover their health. The legislator will see that there is only the choice between voting for bigoted, professional jealousy on the one hand or for humanitarian justice on the other.

Each one of these men will be sailing thru the home district in the next sixty days. See that you and many of your patients, particularly ex-service men meet the distinguished gentleman and impress it on his mind that you are demanding justice for these suffering

thousands. He will have the chance to vote in May or June. We will tell you how he voted.

A congressman at home just before election is very much more sensitive to suggestions from the voters than is true after he gets back to Washington. Be determined to win, do your share of these six things, and WE WILL WIN.

This fight to give disabled soldiers the benefit of Chiropractic adjustments at Government expense was begun five years ago by Dr. Leo L. Spears of Denver. Dr. Spears has spent \$20,000 in this campaign to date. A score of courageous Chiropractors have aided the cause in the past and to each one the writer extends sincere thanks. The time has arrived, however, when each individual Chiropractor must get into the harness and do his share. That is the only way we can win and WIN WE MUST. The profession must stand united and work whole heartedly for the advancement of all and for this great humanitarian service.

GEORGE B. WEST, Bachelor of Science,
Colorado Agricultural College.

VETERANS OF FOREIGN WARS

OF

THE UNITED STATES

FOUNDED 1899

NATIONAL HEADQUARTERS, KANSAS CITY, KANSAS

WHEREAS, the Marshfield Post No. 1180, Veterans of Foreign Wars of the United States, at their regular meeting Thursday, April 15, 1926, passed the following resolution:

To the President and Congress of the United States:

WHEREAS, Chiropractic is proved efficacious in the treatment of disease, by the fact that one-half million people are taking adjustments today and thirty millions are believers in its use, and

WHEREAS, The Disabled Veterans have had nine years medical treatment with two hundred thousand yet ill, and

WHEREAS, They have always been denied Chiropractic by the Veterans Bureau, though thousands would be healed by Chiropractic adjustments, therefore

BE IT RESOLVED, That Marshfield Post No. 1180, Veterans of Foreign Wars of the United States, ask the President and Congress of the United States of America to at once make provision to supply Chiropractic adjustments to each disabled Veteran as may ask it.

CHARLES H. JOHNS,
Adjutant.

PAUL J. SHEPHERD,
Commander.

LEGION RESOLUTIONS

We, THE UNDERSIGNED, feel very deeply interested in Bill H. R. 10240 in its entirety, and amended form providing Chiropractic for the benefit of ex-service men.

We, the ex-service men, consisting of the members in good standing of Chester R. Vickery Post No. 12, located at Dothan, Alabama, do pass this resolution:

That you support and use your influence in seeing others of your Congress, now assembled at Washington, D. C., to support Bill H. R. 10240 and its amended form as now pending before your body.

Done this 9th day of April, 1926, by Chester R. Vickery Post No. 12 of the American Legion.

(Signed) JAS L. ACREE, Jr., Adjutant.

Chester R. Vickery Post No. 12

Dothan, Alabama.

BE IT RESOLVED, That John P. Blake Post, No. 134 American Legion ask the President and Congress of the United States of America to at once make provision to supply Chiropractic adjustments to each disabled veteran as may ask it.

W. E. STITZER,

Post Commander.

J. G. SCHOELLIG,

Post Adjutant.

The above Resolutions were acted and passed upon at a regular meeting convened April 28, 1926.

THE OREGON CHIROPRACTIC ASSOCIATION, INC.

THE OFFICE OF THE STATE SECRETARY-TREASURER

548 BELMONT STREET

PORTLAND, OREGON

April 16th, 1926.

Chiropractors Everywhere:

Gird your loins for the fray.

The fight is on for recognition by the Federal Government.

The little old State of Oregon is the first one over the top. Our quota is 150,000 names and we are getting them.

Some of you boys in thickly populated States could get 500,000 easier than we can get 150,000. GO TO IT: PEP IT UP FELLOWS.

Give the disabled Veterans a chance to get well. Medicine has failed in 20,000 cases. Give Chiropractic a chance. You by your letters and petitions can bring this about. For the sake of HUMANITY try it. Put your energy into this. It is a noble work and fit only for those that have the manhood to stand up and assert themselves. Do not be a laggard. BE UP AND DOING.

With all the force at my command, with all the energy I possess, God willing, I will do anything, anywhere, that will bring our beloved Science, where it can take its proper place in the sun. It is you boys, who MUST do it. You must fight, you must work, you must never quit, 'till this thing is accomplished. In this little town in the far, far West, we have seen the light and are doing our duty as we see it. WONT YOU THEREFORE PLEASE HELP THIS GREAT CAUSE?

Get thousands of letters in to Congressman Johnson, get thousands of petitions into the hands of Mr. West.

These are the weapons we must use. The AMA is not infallible, there must be a weak spot in their armor. The letters and petitions will find it. WORK: WORK: NEVER CEASING.

Always your friend,

CHAS. O. BREACH, D. C.,

State Secy.-Treas. Oregon Chiropractic Assn.

PRIZE CONTEST

To the Editor:

Please make mention of this Thesis Contest in your Editorial Columns in the next issue of your JOURNAL.

DR. D. KOBAK.

PRIZE THESIS CONTEST

The American College of Physical Therapy announces a Prize Contest, subject to the following rules and conditions:

ELIGIBILITY—This contest is open to Licensed Clinicians, Physicists, and Fourth and Fifth Year Medical Students from *recognized* Medical Schools.

SUBJECTS—The subject must be on some branch of physical therapeutics embracing Galvanism, Diathermy, Radiant Heat-Light, Ultra-violet Light, X-Rays, Radium, Hydrotherapy, Exercise.

SCOPE—The paper must be limited to 2,000 words or less and must involve some problem of research, laboratory or clinical, pertaining to closely allied or actually on physical therapeutics. A short abstract of 200 words or less should accompany all papers which are to be typewritten on one side of paper only and double spaced.

TIME—All Theses must be submitted to the Chairman of Thesis Committee, Dr. D. Kobak, 30 North Michigan Avenue, Chicago, not later than August 15, 1926.

JUDGES—The judges will be selected from the faculties of several medical schools, and will be men who are not connected with the College.

PRIZES—There will be six prizes (physical therapy equipment) the total value of which will exceed \$2,500.00.

ANNOUNCEMENT of winners will be made at the Clinical Congress to be held at the Drake Hotel, Chicago, October 18th to 23rd, 1926. The winning papers will become the property of The College and will be published in its official journal.

THE AMERICAN COLLEGE OF PHYSICAL THERAPY

RESPONSIBILITY FOR THE ISSUANCE OF PRESCRIPTIONS IS PLACED ON THE PHYSICIAN, NOT THE DRUGGIST

The United States Circuit Court of Appeals, Eighth Circuit, in reversing a judgment of conviction of defendant Eckert, says that he was a druggist who had registered with the collector of internal revenue as a dealer in the drugs sold. The prosecution took the broad stand that he had violated the Harrison Narcotic Act and was subject to punishment because of the large amount of drugs in the aggregate which he had sold on prescriptions within a given time—approximately the first six months of 1920, during which prescriptions filled by him totaled 228 ounces of morphine and 75 ounces of cocaine, whereas it was testified by a narcotic agent that this far exceeded the average sold by a druggist within the city of St. Louis during that time.

The trial court in its instructions to the jury accepted the theory of the prosecution and charged that the proof as to the great number of prescriptions filled by the defendant during the time selected and the total amount of drugs sold by him in filling them was for the purpose of enabling the jury to reach a conclusion on the question of the defendant's good faith, and that, if when he filled them he knew they had not been issued by the physician in good faith and in the course of the latter's professional practice only, he nevertheless filled them and gave the drugs called for therein to the parties named, the jury would be warranted in finding the defendant guilty; that if a physician issues a prescription in good faith to cure a patient or to alleviate the suffering of the patient, then the druggist has a right to fill it, but that if a physician issues a prescription not with good intent and not in good faith to effect a cure or to alleviate the suffering of the patient, but for purposes of gratifying the appetite of that patient, then such a paper cannot be called a prescription, and that if a druggist knew the prescription had been issued in that way he would violate the act in filling it.

The circuit court of appeals thinks that the theory on which the case was tried and submitted to the jury was untenable, because not within the definition of any of the crimes denounced by the act. It does not place on the druggist the burden of inquiry into the intent and purpose of the physician in issuing the prescriptions; to the contrary, it expressly authorizes the druggist to sell on prescriptions issued by registered physicians. The law leaves entirely with the physician the responsibility as to when, under what conditions, and for what purposes he will issue a prescription for the drug. Responsibility for the issuance of prescriptions is placed on the physician, not the druggist; when brought to the latter to be filled, they are his protection.—(*Eckert v. United States (U. S.)*, 7 Fed. R. (2d) 257.)

MEDICAL SOCIETY OF THE MISSOURI VALLEY

The 39th annual meeting of the Society, to be held jointly in Omaha and Council Bluffs, promises to be

one of the most important sessions of this time-honored organization. The Missouri Valley Medical Association has been for many years an organization for the dissemination of medical knowledge and exchange of ideas among the profession of the states lying wholly or in part in the great Missouri river basin. Last year a remarkable program was given by this society in St. Joseph, Mo. For variability and value of material presented it was equal in quality to that given at the great session of the Tri-State at St. Paul a month later. The contributions to this program by the various departments of the Universities of Missouri, Kansas, Iowa and Nebraska were of a high order. This session did not receive the appreciation that was its due from the profession of that region.

The Universities of Missouri, Kansas, Iowa, Nebraska and Creighton University have promised for this year short, snappy contributions on subjects applicable to the day's work of the practicing physician. It is imperative that the practitioner be kept acquainted with the work going on in the laboratories, and there is no better way of maintaining this contact than by having the laboratory teachers in our medical schools appear and present "their stuff" at frequent intervals before associations composed of practitioners.

The program planned for the Omaha-Council Bluffs meeting will consist of papers and lectures on various scientific and clinical subjects and clinics. Fully half of the time will be devoted to clinics given by men of national reputation. Among those who have already consented to appear on the program and hold clinics are: Dr. Hilding Berglund, Professor of Internal Medicine at the University of Minnesota, Minneapolis; Dr. Elliott C. Cutler, Professor of Surgery of Western Reserve University, Cleveland; Dr. Irving S. Cutter, Dean of Northwestern University College of Medicine, Chicago; Dr. McKim Marriott, Professor of Pediatrics of Washington University, St. Louis; Dr. E. C. Rosenow of the University of Minnesota, Mayo Foundation, Rochester, and Dr. Gabriel Tucker of the Bronchoscopic Clinic of the University Hospital, Philadelphia.

Negotiations are under way with several other men of equal prominence in their respective lines.

The Program Committee will make this meeting one that no up-to-date clinician can afford to miss. A complete program will be published in ample time. Reserve the dates now—September 15-16-17. Headquarters—Hotel Fontenelle, Omaha. Dr. A. D. Dunn, of Omaha, is president. The program committee is composed of: John E. Summers, Omaha, Chairman; Donald Macrea, Council Bluffs, Vice-Chairman; William Wherry, Omaha, Neb.; P. T. Bohan, Kansas City, Mo.; E. H. Skinner, Kansas City, Mo.; T. G. Orr, Kansas City, Mo.; J. M. Mayhew, Lincoln, Neb.; Granville N. Ryan, Des Moines, Iowa; Guy L. Noyes, Columbia, Mo.; Fred Smith, Iowa City; John M. Bell, St. Joseph, Mo.

Arrangement Committee—Earl Sage, Omaha, Neb.; M. E. O'Keefe, Council Bluffs.

CHAS. WOOD FASSETT, M. D., *Secretary*.
115 East 31st St., Kansas City, Mo.

SPECIALIST IN TUBERCULOSIS WANTED FOR INDIA

A graduate physician who has made a specialty of tuberculosis and who is in sympathy with missionary service ideals is being sought by the personnel department of the Board of Foreign Missions of the Methodist Episcopal Church for services in India. He would have a hospital of thirty beds, with an opportunity to develop a public health service, and specialization in tuberculosis and hookworm, in co-operation with other agencies in the field.

The position is open to an M. D. forty years of age or under, and having a family of not more than two children. The applicant should be a member of an evangelical church. Application and inquiries may be addressed to T. A. Hildreth, Board of Foreign Missions, 150 Fifth Avenue, New York City.

BLOOD TRANSFUSION: ITS DANGERS AND LIMITED VALUE

J. F. Baldwin (*American Journal of the Medical Sciences*, July, 1925) reaches the following conclusions:

Transfusion is a procedure by no means free of dangers, some of which are absolutely unavoidable.

It is of no value in acute sepsis, but its use in that condition is particularly dangerous.

In chronic sepsis its value is only in improving the anemia when that has reached a more or less dangerous point.

It is of no use in burns except in chronic stages when the main condition is that of anemia.

It is of no ultimate value in pernicious anemia, but its use is attended with more or less hazard, so that it is questionable if the end results are of any real benefit.

Its chief value in conditions of profound shock or acute anemia from hemorrhage, as in postpartum hemorrhage, ruptured ectopic pregnancy and so forth. Particularly is it of value when given immediately preceding or following some operative procedure in which acute hemorrhage forms an important factor.

It seems to have little or no value in shock unless that shock is the result of acute hemorrhage.

Its very great value in hemorrhages seen occasionally in newborn infants has apparently been conclusively established. It seems to be in such conditions unnecessary to type the mother's blood, which can be taken at once and the injection of a small amount into the vein of the infant, or preferably perhaps into the superior longitudinal sinus, may prove a lifesaving procedure.

MEMORANDUM OF SALE OF ARSENIC HELD INADMISSIBLE IN MURDER CASE

In a prosecution for murder by poisoning with arsenic the Illinois Supreme Court held, *People v. Zalimas*, 319 Ill. 186, 149 N. E. 759, that a drug-gist's memorandum of a sale of arsenic bearing the accused's name as the purchaser was not admissible

as original evidence, but it was proper for the maker as a witness to use it to refresh his memory and, after doing so, to testify to such facts as he was then able to remember. He did so testify, but his memory did not enable him to recall the purchaser as the accused. He did not know the name of the purchaser, but inserted in the memorandum the name the unknown purchaser chose to give him. It was held error to admit the memorandum in evidence, and there was no evidence connecting the accused with the purchase of arsenic. It was also held that the fact that a wholesale drug store sold a retail drug store a pound of arsenic in August did not tend to prove that the retail drug store sold arsenic to the accused three months later in November. The only effect of this evidence was held to be to attach a fictitious importance to the sale by the wholesale company to the retailer, and its admission was held prejudicial error.

PERSISTENCE OF MENSTRUATION AFTER REMOVAL OF BOTH OVARIES

A. NORMAN McARTHUR

(*M. J. Australia* 2: 193, Aug. 23, 1924.)

The author reports three cases in which he removed both tubes and ovaries and where menstruation subsequently occurred regularly for year. Recently he operated on a woman for two big ovarian cysts. They were grossly adherent in the pelvis and were shelled out and easily recognized as true ovarian cysts; the infundibular-pelvic fold, the tubes and the round ligaments could all be defined. These cysts were cleanly and completely removed. The patient has been menstruating regularly ever since. He cites another case, a woman who had had one ovary removed and came for operation because of persistent dysmenorrhea. McArthur could find no trace of the other ovary, and removed the uterus. He says he does not believe that supplementary ovarian tissue can be found elsewhere than in the normal site. He asks whether it could be possible for other endocrines, particularly the pituitary, the thyroid and perhaps the adrenals, in freak cases to carry on and imitate the menses independently of ovarian secretions.

MAGNESIUM SULPHATE IN THE TREATMENT OF CHOREA

Chorea is a symptom rather than a disease entity and is often very distressing. Most cases occur in childhood, usually associated with frequent attacks of tonsillitis or rheumatism.

In the *South, M. J.* for February, 1926, Dr. Hugh L. Dwyer recommends that choreic patients be hospitalized and kept quiet by all rational means until the foci of infection can be removed.

Dr. Dwyer has used magnesium sulphate more commonly than any other drug in treating this condition. He gives daily intramuscular injections of 10 to 15 cc. of a 25-percent solution and continues these for 3 weeks or longer, as required.

All treatment for chorea succeeds best if instituted early. Magnesium sulphate gives best re-

sults in the more severe cases, most (but not all) of which are benefited.

The basic principles of treatment are mental and physical rest and quiet and elimination of toxic states.

The disease seems to be self-limited, with a duration of 2 to 12 weeks (average $5\frac{1}{2}$ weeks).

ADRENALIN AND ABSORPTION

B. DOUGLAS

(*Presse Méd.* 32: 998, Dec. 13, 1924.)

Douglas relates the researches effected by him in the laboratory of Professor Doyon: (1) Adrenalin in consequence of its vasomotor action exerts a restraining or retarding action on the absorption of poisons by the capillaries; the subject may be preserved from death. (2) This action is observed on absorption of the following substances: strychnine sulphate, pure strychnine, pure nicotine, cocaine hydrochlorate, pure strophanthin, nitrate of aconite and various staining agents. (3) By the same mechanism, adrenalin may definitely preserve guinea-pigs inoculated with doses of cobra venom fatal to control animals. (4) The vasomotor action of adrenalin is also opposed to the effects of inoculation of tetanic toxin. In the control animal, deprived of adrenalin, the inoculation of the same dose occasions the evolution of tetanus. (5) The influence of adrenalin may be observed on eroded skin, the mucosae (tongue, stomach, duodenum, jejunum, ileum, appendix), the meninges, the pleura, the peritoneum and the muscles.

Society Proceedings

Adams County

The regular meeting of the Society, held at the Quincy Elks' Club, was called to order at 8:25 p. m., June 14, 1926, by the president. Thirty members and two guests were present.

The president read a telegram that the secretary had received stating that Dr. G. W. Wilson of St. Louis would be unable to address the Society as had been planned, and that he had sent Dr. William Becke in his place. The president then introduced Dr. Becke, who gave a very practical talk on working up a medical case. This was made more interesting by presentation of cases and careful histories by Dr. H. J. Jurgens with a case of tabes dorsalis, and Dr. O. F. Shulian with a case of pernicious anemia. The discussion was led by Drs. Pearce, Bitter, Williams, Nickerson, Center, McReynolds and Cohen, and finally closed by Dr. Becke. Dr. Walter Stevenson demonstrated the audiometer, a new apparatus that has placed the testing of hearing on a very scientific basis.

Dr. T. B. Knox read a case report of Hodgkin's disease and Dr. J. A. Koch one of adenocarcinoma of the bowel. The discussion was led by Drs. Becke, Nickerson, Jurgens, A. H. Bitter and finally closed by Dr. Koch.

Business Session

A rising vote of thanks was extended to Dr. Becke for coming to Quincy. Dr. Center, chairman of the

orthopedic clinic committee, reported that the clinics were running satisfactorily. Dr. Koch, chairman of the committee appointed to investigate the matter pertaining to a local bath parlor, read the following report:

"We recommend that a communication be sent to Mr. R. R. Swaynie that a complaint has been received from one of the members of the Society in reference to the manner in which he handles patients and it is the request of the Society that he (Swaynie) keep in communication with the physicians of his patrons in order that the good feeling that has been evident between Swaynie and the medical profession be continued as in the past. It is also recommended that the ad of the Swaynie Bath System be continued to be accepted by our Bulletin."

(Signed) JOHN A. KOCH, M. D., *Chairman.*

CHAS. D. CENTER, M. D.

W. W. WILLIAMS, M. D.

The report was received and the recommendations concurred in. The secretary explained the desirability of the Adams County Medical Society publishing a Health Column in our local newspaper and recommended that such a procedure be done as the space could be secured free of charge and the material be furnished by the Lay-Educational Committee of the Illinois State Medical Society. Dr. Pearce made a motion that the secretary's recommendation be concurred in and the president appointed a committee to carry out the details. Dr. John Koch made an amendment to the motion that the matter be referred to the Public Health Committee with power. This latter motion was seconded and carried. The secretary then read a communication from the chairman of the Crippled Children's Committee of the Women's Clubs in regard to the matter of fees for physical examination of poor children. Drs. Center, Stevenson and McReynolds were appointed a committee to investigate the matter and report at the next meeting. The secretary announced that the Program Committee had been endeavoring to make plans to hold some large meeting during the year and had extended an invitation to Drs. W. J. and Charles Mayo to address the Society next fall. This invitation had already been accepted, and the secretary requested that inasmuch as the meeting would be probably the largest in the history of the Adams County Medical Society, that now was the time to appoint a committee to have charge of same. It was moved by Dr. Nickerson that the Program Committee have charge of this special meeting of the society.

A bill for \$1.80 for telegrams was approved and the application of Dr. J. Frank Wilson of Versailles for membership in the Society turned over to the Board of Censors.

The meeting adjourned about 10:45 p. m.

HAROLD SWANBERG, M. D., *Secretary.*

Greene County

The Greene County Medical Society met in regular session in Coonrad Park, Greenfield, Ill., June 11, 1926.

This being our annual picnic, the members brought baskets laden with eats of a quality and quantity sufficient to tempt the most fastidious. Our wives, sons,

daughters and friends being more numerous and somewhat better looking than we professional gentlemen were given the right of way, and while we, the real etiological factors in the case, were busy pitching horseshoes and otherwise entertaining ourselves in the shade and refreshing breezes of this nice little park, the women folk spread our eats in a most tempting fashion, on nicely prepared tables, and at the proper time they interrupted our festivities by a call to dinner just at a moment when Drs. Cravens and McLaren were within two points of winning a hotly contested game of horseshoes.

The call to dinner so stimulated these two veterans that the game was quickly won and we repaired to the scene of real activity, where, with Drs. Bulger and Cravins as chief waiters, assisted by a corps of ladies, we proceeded to enjoy the eats and the splendid hospitality of our hosts in a fashion that will linger as a pleasant memory for some years to come.

After dinner we listened to a lecture by Dr. John R. Merriman of Springfield, on "Diabetes." The doctor dealt with the cause and treatment of this very important disease in a clear cut, concise and thorough manner, and yet in language that was understood and enjoyed by the layman as well as by the physician.

We were fortunate in securing Dr. Merriman, and we hope to have him with us again at some future meeting. Following the lecture a brief entertainment was put on by some of the young people of Greenfield, which was thoroughly enjoyed by us all.

A brief business session followed. In the absence of two censors the president appointed Drs. J. A. Cravins and E. E. Jouett as censors pro tem. White Hall was chosen as the place for our September meeting. An invitation from the physicians of Greenfield to make that city the regular meeting place for our June meeting was accepted by the censors.

A rising vote of thanks was tendered Dr. Merriman for his lecture and to the physicians and citizens of Greenfield for the royal way in which they entertained us.

Nine members present.

W. H. GARRISON, *Secretary*.

Jefferson and Hamilton Counties

The Jefferson and Hamilton County Medical societies met in their regular monthly meeting on the evening of May 28, 1926, in the reception rooms of Drs. Hamilton and Maxey, Mt. Vernon, there being an attendance from this and adjoining counties numbering more than fifty doctors.

After the reading and adoption of the minutes of the previous meeting, the communication from Mr. Elmhirst, representing the Tuberculosis County Association, and Mr. Keller, saying that they would be willing to go to the financial extent of \$300.00, if aided by the support of the County Medical Society and other organizations, to compel the Board of Supervisors to do their duty according to law, in the use of the money that has been voted by the legal voters of the county. They also recommended that Attorney Frank Thompson be employed to prosecute said board. After a short discussion, a motion was made by Dr. Edmondson, sec-

onded by Dr. Hamilton, that this Society go on record as favoring such an action. A motion was made and seconded that a committee be appointed to confer and arrange with other interested organizations to further action against the Board or Supervisors, forcing them to use this fund to the benefit of these legitimately needing it. Appointment of said committee was deferred by the president until a later date.

The regular program then followed: "A Symposium on Pneumonia," by Dr. Neilson, of St. Louis University, Dr. Alexander, Dr. Sante and Dr. Kinsella, all of St. Louis.

The subject was thoroughly discussed and explained by the essayists. The plain explanation of the disease, the cause, the diagnosis and treatment, with the possibility of prevention, was clearly explained.

Dr. Alexander set forth, very plainly and intelligently, how the disease, in its different types, can be spread among a family or by other associations. The most common way of transmitting is by dust, breath, etc. He also showed, by the mannikin, that by close association of these animals, epidemics could and have been spread. He further showed that four different types of infection could be demonstrated. You may spray the nose and throat with the germ, without inoculation, but when it gets beyond the larynx it travels rapidly and certainly into the bronchi, but not on continuously into the air cells, afterward causing infiltration and exudate in air cells.

Dr. Leroy Sante followed with "X-ray demonstrations of Pneumonia."

Dr. Kinsella took up the treatment of Pneumonia, especially the serum therapy. He stated that the death rate from Lobar Pneumonia was from 30 to 48 per cent, averaging 38 per cent.

Discussions.

Luncheon.

Adjournment.

J. W. HAMILTON, *Secretary*,
Jefferson County Medical Society.

Jefferson County

The Jefferson County Medical Society held its June meeting in the large waiting room of Drs. Hamilton and Maxey's offices, Mt. Vernon, June 17, at 7:30 p. m. The evening was fine and a good attendance was on hand, there being about seventy-five doctors present to enjoy one of the best lectures ever delivered before the Society. Dr. W. H. Englebach of St. Louis was the orator of the evening and chose for his subject "Diagnosis and Treatment of Diseases of the Heart," supplemented by the screen and lantern slides, and notwithstanding the heat and crowded condition of the hall, held his audience spellbound for two hours. We are always glad to have Dr. Englebach with us, as we always get full value received for the time spent. He is a master of his subject and has a happy way of making things so plain.

After the program a light luncheon was served and a social hour was enjoyed. This was the largest and best meeting ever enjoyed by this Society, with a membership of twenty-eight, and an attendance of seventy-five shows no lack of interest in this part of

the state. The Society will have no more meetings until September, or after the hot weather is over.

J. W. HAMILTON, *Secretary*.
ANDY HALL, *President*.

Ogle County

The Ogle County Medical Society met in regular session in the Opera House at Oregon on May 26, 1926, at 1:30 p. m.

President Akins called the meeting to order. Roll call found twelve members present and five visiting friends. Minutes of previous meeting were read by the secretary, and approved.

PROGRAM

Dr. Harold M. Camp of Monmouth, secretary State Medical Society, read a most excellent paper on "Acute Osteomyelitis." This paper was also ably discussed by Drs. Beveridge, Christenson, Kittler, Petut, Tuite, Murphy and Weld.

Dr. E. H. Weld of Rockford gave a demonstration with lantern slides on "Goiter Problems." This subject was interesting and well illustrated. Following, there was a good discussion by Drs. Christenson, Beveridge, Kittler, Petut, Murphy and Tuite.

The question of raising the fees was taken up, and the following committee was appointed: Dr. H. H. Sheets of Oregon, Dr. C. Powell of Polo and Dr. W. E. Kittler of Rochelle, to report at a later date.

Dr. F. G. Audreen and Dr. Lewis Petut, both of Rochelle, presented transfer cards and were duly accepted as members of the Society.

Dr. H. M. Camp, owing to the long distance he had to travel, was compelled to leave early in the meeting. Motion made by Dr. Kittler that a rising vote of thanks be given Drs. Camp and Weld for their able assistance in making our meeting a success, and that the secretary be instructed to write to Dr. Camp our appreciation for his instructive paper. Motion carried.

No further business to come before the meeting, the Society adjourned to meet at a call meeting.

Dr. P. T. KRETSINGER, *Secretary*.

Perry County

The Perry County Medical Society gave a surprise dinner, May 27, at the home of Dr. M. Adles, secretary of the Society, for Dr. J. S. Templeton of Pinckneyville, who had been elected councilor for the new district by the State Medical Society, held in Champaign, May 18 to 20, 1926.

The would-be toastmaster Dr. J. J. Boenheim being detained in professional service, Dr. L. V. Gates, president of the Society, acted as toastmaster. The announcement by the toastmaster that the occasion was in honor of the councilor, Dr. Templeton, caused a storm which raged for several seconds, members demanding a speech.

After enjoying the sumptuous dinner served by the hosts, the doctors repaired to the parlor, where discussions based on personal cases were participated in by all, namely, "Hemorrhagic Complications in Obstetrics," "Treatment in the Later Stages of Lues," and also the "Treatment of Measles," which had developed in a general epidemic in our community.

On departure everyone expressed himself as having spent an enjoyable and profitable evening.

L. V. GATES, *President*.
M. ADLES, *Secretary*.

Marriages

JOHN H. DONOVAN to Miss Besse Evans, both of Windsor, Ill., May 3.

Personals

Dr. Charles J. Drueck, Chicago, gave an illustrated lecture before the Lin County Medical Society, Cedar Rapids, May 20, on Practical Proctology.

Dr. Ralph H. Kuhns, Chicago, spoke before a combined meeting of the Faculty of the Illinois Post-Graduate Medical School and the Medical Staff of the West Side Hospital, Chicago, June 18, on the subject of 'Intra-Cranial Injuries in the New-Born.'

Dr. and Mrs. Arthur M. Corwin, of Chicago, are in Europe for July and August visiting Italian cities and the lake region touching the high places of Switzerland and France.

Dr. R. H. Jacobs, after eleven years service on staff of the Illinois Soldiers' and Sailors' Home and two years on staff of Jacksonville State Hospital, has returned to general practice at Metropolis.

Dr. Bertha Van Hoosen recently received the honorary degree of LL.D. from Loyola University.

Dr. John Ridlon received the honorary degree of doctor of science at the commencement of Tufts College, Boston, June 14.

Dr. Isaac A. Abt was elected president of the Chicago Medical Society, June 15, and Dr. Frank R. Morton secretary.

Dr. Perry H. Wessel has been elected president of the Moline Physicians Club for the ensuing year.

The honorary degree of doctor of science was conferred on Dr. Frank Smithies by Washburn College, Topeka, Kan., June 2.

Dr. John Gordon Wilson has been elected chief of staff of the Wesley Memorial Hospital, to succeed the late Dr. William E. Schroeder.

Dr. Frank Billings received the honorary degree of doctor of science at the commencement exercises of Northwestern University, June 14.

Dr. Henry G. Schmidt has been elected president of the Elgin Physicians' Club, and Dr. Floyd A. Pingree secretary-treasurer (re-elected); the next meeting will be in October.

Dr. William Allen Pusey, formerly president of the American Medical Association, gave the commencement address at the University of Illinois School of Medicine, June 12.

Dr. G. Henry Mundt, Chicago, president-elect of the Illinois State Medical Society, addressed the Vermilion County Medical Society, June 1, on "The Value of a Medical Society to the Physician."

Dr. Noble Van Zant, Grant Park, has accepted a position at the American Hospital at Monrovia, Liberia, which is operated by the American Lutheran Mission in conjunction with the Firestone Rubber Company.

Dr. Marion K. Bowles, Joliet, was elected president of the Illinois Business and Professional Women's Association at the annual meeting at Aurora, May 22, succeeding Dr. Annie I. Glidden, Danville.

Dr. Charles H. Pelton, superintendent of the Elyria Memorial Hospital, Elyria, Ohio, has been appointed superintendent of St. Luke's Hospital, Chicago, and will take up his new duties about July 1. Dr. Pelton has been superintendent of the Elyria Memorial Hospital for about four years, and previous to that appointment he was assistant to the late Dr. Arthur B. Ancker, in whose honor the city and county hospital at St. Paul was named the Ancker Memorial Hospital.

Dr. Irving F. Stein, Chicago, held a gynecologic diagnostic clinic before the alumni of the Detroit College of Medicine and Surgery, in Detroit, June 18.

Dr. Herman L. Kretschmer, Chicago, addressed the Sangamon County Medical Society, Springfield, June 3, on "Urology and Its Relation to General Medicine and Surgery," illustrated by lantern slides.

News Notes

—The Sisters of Mercy of the Holy Cross have sold the Mercy Hospital, Urbana, to the Servants of the Holy Heart of Kankakee for \$200,000, it is reported.

—The new Mercyville Sanatorium for mental diseases at Aurora, operated by the Sisters of Mercy, was recently dedicated; Dr. Henry J. Gahagan will be the medical director.

—Twenty-five student nurses at the Galesburg Cottage Hospital, Galesburg, went on strike, June 17, it is reported, in protest to the dropping of three nurses from the training school who failed to pass the examinations. The nurses were given time to return to their studies and work without penalty; only one returned; the other twenty-four student nurses were expelled by the hospital board. Meanwhile, patients in the hospital are being cared for by graduate nurses from nearby cities.

—The Illinois Training School for Nurses, which, for about forty-five years, has served the Cook County Hospital, will be transferred to the University of Chicago. When the Cook County commissioners have completed other arrangements for the nursing of patients in Cook County Hospital, the property and resources of the Illinois training school, involving about \$500,000,

will be turned over to the university, making possible a school for nurses in connection with the university medical program on the South Side. Not less than \$1,000,000 will be required to endow the undertaking, and this fund must come from benefactors who see the significance of the project. The board of directors of the Illinois Training School for Nurses comprise, among many others, Mrs. Harry F. Williams, president; Mrs. Charles T. Mordock, corresponding secretary; Miss Augusta Fenger, Mrs. Bert-ram Sippy and Mrs. Charles H. Wacker.

—A marble bust of the late Dr. Eugene S. Talbot was presented to the American Medical Association, June 4, at a meeting in the assembly hall of relatives and friends, and officers of the association. Two friends of many years made the presentation speeches; Dr. George Van Ingen Brown, of Milwaukee, said there was no need of marble to perpetuate the memory of a life so helpful and so well known throughout the civilized world; Dr. Frank Billings spoke of the character and ideals of Dr. Talbot; of his long life of work in the Association and his part in establishing the Section on Stomatology. Dr. Edward B. Heckel, Pittsburgh, chairman of the Board of Trustees, in accepting the bust on behalf of the American Medical Association, said that we are glad to have this concrete evidence of the esteem in which Dr. Talbot was held, but that his ideals would endure longer than the marble itself. The original of the bust stands at the entrance of the stomatologic department of the University of Italy in Rome. It was made for the Italian government by the sculptor Ernesto Gazzerio.

—Contracts have been let for the construction of a fourth floor addition to the Lutheran Hospital, Moline, which will be the first unit of an expansion program to be carried out within the next two years.

—Graduates of Rush Medical College had contributed \$230,000 up to June 5 toward the alumni quota of \$2,000,000 in the University of Chicago's endowment drive; their self-made goal is \$250,000. Graduates of Rush in forty-one states, three territories and five foreign countries have subscribed; 500 Rush Alumni in Chicago gave \$124,475.

—Under the auspices of the Chicago Medical Society, the staff of Cook County Hospital will give two courses of two weeks of clinics, July

19-31 and August 1-14. There will be no fee and no diplomas given, and admission will be by card only, which will be sent to those who register early in reply to more than 10,000 letters mailed by the Chicago Medical Society to physicians in the state. Many more applications for the courses were received than could be accommodated.

—The department of health of Chicago has issued an order prohibiting the sale or use in the city of leather dyes containing toxic solvents on and after March 1, 1927, and requiring that all shoe dyes offered for sale or used from June 1, 1926, to March 1, 1927, shall have a "caution label" as follows: "Shoes that have been dyed must be permitted to stand in the open (not wrapped up) for not less than seventy-two hours after dyeing, before being worn, in order to avoid poisonous effects to the wearer. This dye must not be used on canvas, satin or other shoes manufactured from fabrics. Under no circumstances should shoes or edges of the soles of shoes be dyed while on the feet." A notice will be posted in every shoe shop, shoe-shining parlor, and any place where shoes are dyed, and any person failing to comply with the foregoing order will be prosecuted under section 2916 of the municipal code, or the dye materials destroyed, or both. This action is taken as a public health measure, and the health commissioner requests the cooperation of all concerned.

—The state department of health, last year, conducted surveys of the health services in fifteen Illinois cities ranging in population from 30,000 to 80,000. A report of these surveys makes up the May-June number of *Illinois Health News*. The standards used in this work were those developed by the American Public Health Association, which assigns a value to each of forty-six items of health service, the total score making 1,000 points. A large part of the work was done by Dr. Thomas Parran, Jr., U. S. Public Health Service, who was assisted by Dr. John W. H. Pollard, Dr. Samuel S. Winner and others. The rating given the cities varied from 812 points for Evanston to 415 points for East St. Louis, and in the following order: Evanston, Rockford, Decatur, Springfield, Oak Park, Peoria, Moline, Cicero, Aurora, Quincy, Rock Island, Bloomington, Danville, Joliet and East St. Louis. The report states that the cities at the top of the list have placed their health

departments on a scientific rather than a political basis, and that the greatest handicap to municipal public health work in Illinois arises from the influence of local partisan politics.

—The annual meeting of the Mid-Western Association of Anesthetists will be held October 11-14, 1926, in Kansas City, Mo., at the same time as the Clinic Week there. Headquarters, Baltimore Hotel. An interesting and attractive session is in the process of making. Any physician or dentist desiring to read a paper should send the title of his paper to Ralph M. Water, M.D., Sec-Treasurer, 425 Argyle Bldg., Kansas City, Mo.

—The second annual meeting and banquet of the Ensworth-Central Medical College Alumni will be held at Hotel President, Wednesday evening, Oct. 13, 1926, during the Kansas City Fall Clinics week. We now have an enrollment of fifty members. We are anxious to have enrolled all of the graduates of the Northwestern, Central and Ensworth Medical Colleges, and want them with us at this meeting. The dues are \$1.00 per year. The professors of the three colleges are eligible to membership. An entertaining program is being arranged. Please send your name, stating that you will attend, to Charles Wood Fassett, M.D. Secretary, 115 East Thirty-first Street, Kansas City, Missouri.

Deaths

ALONZO P. BAKER, Herrin, Ill.; Medical College of Ohio, Cincinnati; 1875; Civil War veteran; aged 77; died, May 21, of heart disease and asthma.

FRANK EUGENE BALDWIN, Peoria, Ill.; Rush Medical College, Chicago, 1897; aged 51; died, May 16, of pneumonia.

MARY CLAGETT CORNELL, Chicago; Hahnemann Medical College and Hospital, Chicago, 1901; aged 61; died, May 12, of bronchopneumonia and chronic myocarditis.

RALPH B. CRAWFORD, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1882; aged, 85; died, April 11, of myocarditis.

JOHN M. CULLEN, Chicago; College of Physicians and Surgeons, Chicago, 1897; died, May 27, of chronic nephritis.

EDWARD B. FETHERSTON, Chicago; College of Physicians and Surgeons, Chicago, 1893; aged 64; died recently, of heart disease.

FRANK H. KIMBALL, Rockford, Ill.; Chicago Medical College, 1880; aged 70; formerly on the staff of the Rockford City Hospital; where he died, May 8, following a long illness.

CARL WINTRICH, Chicago (licensed, Ohio, 1896); aged 79; died, April 30, of chronic myocarditis.

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SEVENTY-SEVENTH ANNUAL MEETING AT MOLINE, MAY 31, JUNE 1 and 2, 1927

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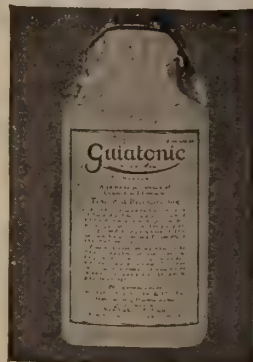


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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

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Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

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Editorial

CLEAN MILK OR CLEANED MILK?

The order of the Health Commissioner of Chicago barring all milk not from tuberculin tested cows for sale in that city, is more significant than may first appear. This action followed that of the Health Commissioner of Rockford, Illinois, who urged the importance of milk being clean in its original production. These are the first official public recognitions of the fact that pasteurization is not all-sufficient. Pasteurization has for some time been generally accepted as making all milk, so labeled, not only safe, but highly desirable. Attention to the manner of production on the farms and the health of the cows has been sadly neglected. The milk dealers in many localities only require that milk reach them before actually souring.

Pasteurization has enjoyed the best of publicity and the cleverest propaganda for years. This has been so effective that many city people have a mental picture of supremely healthy cows cared for in ideally sanitary barns when they see "Pasteurized" on the cap of a milk bottle. The impression made by this propaganda is almost equally evident among many of the medical profession. Our physicians' interest in and knowledge of the general milk supply has not been aroused. They, too, apparently accept pasteurization as some superhuman agency infallible in action, which automatically not only renders all milk so labelled safe, but even desirable. There is no quarrel with pasteurization. It is a necessary protection to the general milk supply. However, it is time that pasteurization be again recognized for first what it was originally designed to do.

Pasteurization is a method of applying heat to milk over a given period of time in order to kill disease-producing bacteria. Its action in this respect depends upon the unfailing application of a temperature of 142° F. for 30 minutes. In commercial milk plants modern equipment

operated with the assistance of recording thermometers make this process accurately possible. If no breakdowns occur and the operation is carefully and honestly supervised, a properly safeguarded milk results. This proper pasteurization has been shown to reduce the living bacteria present in raw milk 98 per cent. It is fair to say that milk dealers generally do an honest, efficient job of pasteurizing.

No other favorable change in the milk can occur as a result of pasteurization except the killing of harmful bacteria. The killed organisms remain in the product, but the heat acts also to destroy some of the essential vitamins and unfavorably changes the physical composition of the milk. Pasteurization cannot put back flavor and taste lost by previous careless handling. A widespread fallacy blames pasteurization with the characteristic flat taste so common in our city milk. This undesirable taste is in reality caused by contamination with gross filth before pasteurization.

Will any reasonable person agree that any food product is improved by contamination with gross filth? Will any person agree that milk, so excellent a medium for all bacterial growth, will be so improved? Can you persuade yourself that a mixture of manure and stable dust with milk is all right simply because this product will finally on arrival at the milk plant be carefully strained and clarified out before pasteurization? Will any consumer knowingly, willingly and freely use a food product so contaminated? No other food product, except pasteurized milk, is accepted with so little thought as to its cleanliness.

Dairymen should not be blamed for the present situation. The dairymen generally have been made to feel that it makes little difference what efforts they make; their milk will be "cooked" anyway. No rewards are paid them for having healthy cows and for taking pains to produce clean milk unless they seek a special outlet for their milk. Many dairymen maintain healthy herds because they know that only such are profitable. Others produce clean milk because they are so constituted themselves that they will not offer for sale a product they would not use. Many who might do so have been discouraged because their neighbor who milks unwashed teats with dirty hands gets just as much for his milk. The farmer who carefully washes his milking machine after each milking, placing it in an ap-

proved antiseptic solution until again needed, finds his neighbor paid just as much who douses his milker in the horse trough and hangs it in the barn.

The care and attention to detail, inseparable from the production of clean milk costs money; more money than the public is now paying for milk. The public can be educated to pay the increased cost. The improvement in flavor, taste and keeping quality will literally sell itself. There are numerous examples of farsighted milk dealers who are building their ever-growing pasteurized milk sales on a foundation of clean milk from healthy cows. They pay their producing dairymen more and in turn their customers are glad to pay them more.

The constantly growing sales of certified milk illustrate the public's appreciation of quality in milk. The effect of certified milk to educate the consuming public to quality would be more widespread and effective if the superlative product more generally received the support to which it is entitled from physicians and milk dealers. In those cities like Detroit, where this interest and support is active, sales of certified milk at more than twice the price of pasteurized milk, prove the public's willingness to pay for quality. Will anyone argue that this willingness to pay for quality will not be evident with respect to any dairy product when the public knows that quality exists?

Our cities will secure clean milk instead of cleaned milk just as fast as they learn what the problem really is. Physicians and health officials working with farsighted milk dealers can bring good milk to the attention of any city in short order. May the motto "Clean Milk, Not Cleaned Milk" guide more health departments in their future undertakings.

A NEW COUNCILOR DISTRICT

The Ninth Councilor District in the southern end of the state, formerly was composed of 23 counties. The distance from north to south was 150 miles and is an equal distance from east to west. The transportation facilities between counties is very inadequate and difficult both by rail and auto, and by the latter method almost impossible at certain seasons of the year. The number of counties comprising the ninth district, together with the handicap just mentioned, made it neither practical nor possible for the Coun-

cilor of the district to visit all of the units which made up his Councilor District without a ruinous sacrifice to his business or profession.

In the interest of better organization and in order to bring about greater efficiency the House of Delegates of the State Society at the May meeting created a Tenth Council District by dividing what was formerly known as the Ninth District. The new Tenth District comprises the counties St. Clair, Monroe, Washington, Randolph, Perry, Jackson, Union, Alexander and Pulaski.

The newly elected Councilor for the recently created Tenth District is Doctor J. S. Templeton, Pinckneyville.

COUNCILOR DISTRICTS AND OFFICERS

First District—Jo Daviess, Carroll, Ogle, Stephenson, De Kalb, Boone, McHenry, Kane and Winnebago counties. D. B. Penniman, Councilor, Rockford.

Second District—Woodford, Livingston, Grundy, Kendall, La Salle, Bureau, Whiteside, Lee, Putnam and Marshall counties. E. E. Perisho, Councilor, Streator.

Third District—Lake, Cook, DuPage, Will and Kankakee counties. S. J. McNeill, J. S. Nagel and R. R. Ferguson, Chicago, Councilors.

Fourth District—Schuyler, Stark, McDonough, Fulton, Hancock, Henderson, Warren, Knox, Peoria, Henry, Mercer and Rock Island counties. Wm. D. Chapman, Councilor, Silvis.

Fifth District—Sangamon, Menard, Mason, Logan, Tazewell, McLean, DeWitt, Ford and Iroquois counties. S. E. Munson, Councilor, Springfield.

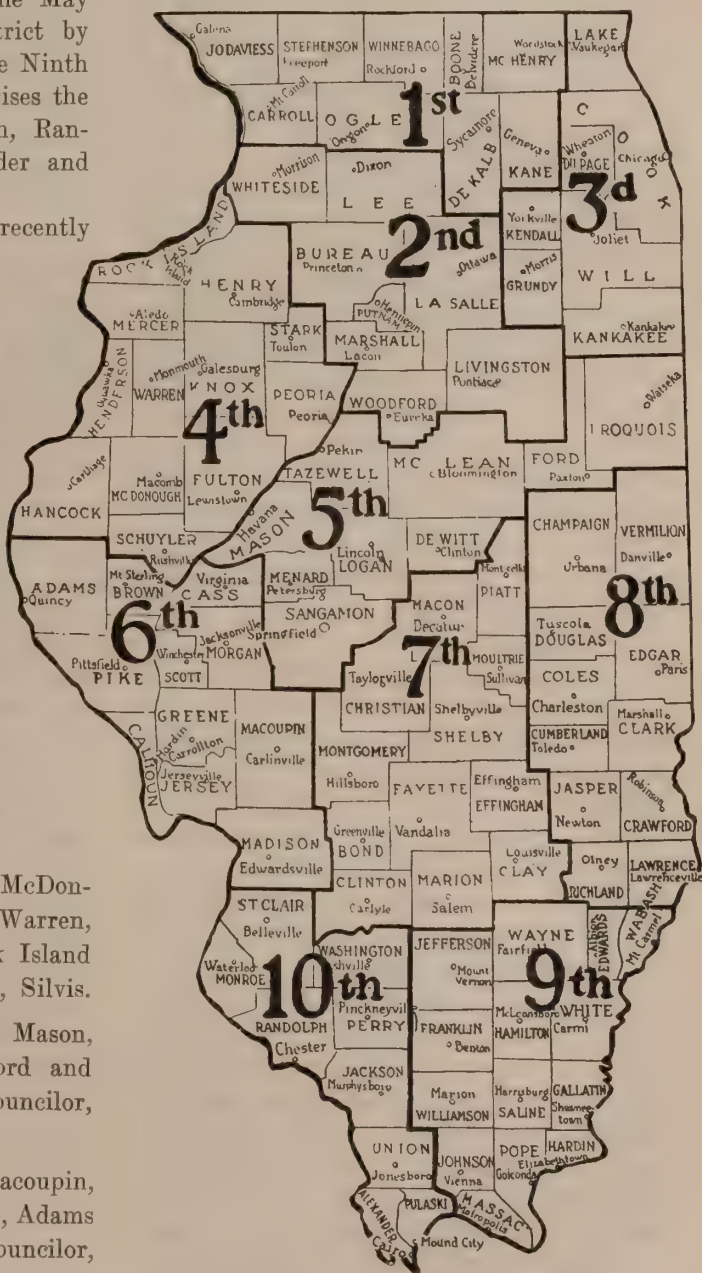
Sixth District—Madison, Jersey, Macoupin, Green, Morgan, Scott, Cass, Brown, Pike, Adams and Calhoun counties. H. P. Bierne Councilor, Quincy.

Seventh District—Platt, Macon, Christian, Moultrie, Shelby, Montgomery, Bond, Fayette, Effingham, Clinton, Marion, Clay counties. I. H. Neece, Decatur.

Eighth District—Champaign, Vermilion, Douglas, Edgar, Coles, Clark, Cumberland, Jas-

per, Crawford, Richland and Lawrence counties. Cleaves Bennett, Champaign.

The Ninth Councilor District, the new arrangement creating a tenth district, divided the old ninth district. The counties comprising the



MAP OF ILLINOIS COUNCILOR DISTRICTS

present Ninth District are Jefferson, Franklin, Williamson, Johnson, Massac, Wayne, Hamilton, Saline, Polk, Edwards, Wabash, White, Gallatin and Hardin counties. Andy Hall Councilor, Mt. Vernon.

IMPROVING THE HUMAN RACE BY STANDARDIZED BREEDING TENETS

A staple of the uplifter's stock in trade is recurrent agitation of questions of scientific standardization of legalized mating of the sexes. That such procedure will hasten mortal millennium is claimed by one class of those obsessed individuals who must have some condition to turn topsy-turvy so that they will have something to talk about, as, to such persons, argument is dearer than the breath of life.

To beat Nature at her own game is the ambition of such egotistic materialists and theoretic spiritual dictators. Since the days of the patriarchs man has been raising towers of Babel only to see them swept away. That immutable force known as fate or God or whatever freedom of thought impels one to term the all-powerful and intangible force dominating the universe has as yet never been isolated like the *sphirochetæ* pallida or the violet ray. Yet the conceit of man suffices to engender in some groups the audacity to lay down the law as to who should breed, as to who should be sterile and what shall or shall not be the future of man.

Wrote a great poet:

"Man, proud man, dressed in a little brief authority

Plays such fantastic tricks before high heaven
As makes the very angels weep."

Substitute "reformer" for "man" and the strength and aptness of the remark is doubled from all sane standpoints of the present day.

True science is exact science and of all the exact sciences the purest is mathematics.

One of the laws of mathematical computation is that a man's premise must be definite before he can start for a conclusion. If standardized, legalized mating of the sexes, or as it is termed "eugenics," is to be successful, those who would make it so must know first exactly what type of human is necessary for the perfection of the human race.

To the most casual bystander it is apparent immediately that the word "prototype" might easily have different standards in different climates. A man who is half a fish would be a wonder for ocean habitats. Such a man would be out of his element in those arctic regions that are being brought daily into closer compass with everyday life. A man who was all brain and no body would be a ring-tail roarer among the

Llamas and pure thinkers of the far east or the Esotericians or deep students of the civilized world. Dempsey, Tunney or Wills would amount to far more in the midst of the jungles. Before any group of mortals decides what type is the fittest for survival there is much to be taken into consideration. A man whose especial talents would have made him a little Napoleon some fifty years ago might be only a mediocre quantity if set down in the midst of modern inventions. Yet periodically for academic discussion in medical and scientific literature up pops this eugenics question.

To be sure, as remarked previously, no one knows which will be the type fittest for ultimate survival. Neither can any one explain why families, seemingly ideal from a physical, mental and spiritual standpoint to act as sources for race perpetuation become extinct without reason. Nor why families, equally undesirable in all reason to remain on top of the earth, flourish like the proverbial green bay tree.

The only possible answer would seem to be one quoted from the catechism: "What is a mystery?" "A mystery is something we cannot understand."

Secrets of race perpetuation appear to be among nature's mysteries. Of these secrets man has solved the technique of many but the exact method of none.

Sex, the paramount mystery of life, piques man's pride and his curiosity. The mechanism of life has been reproduced by man. The mechanism of sex trembles upon the eve of discovery. But though the "how" may seem apparent, no man yet has dared set forth the "why." That secret remains in the beyond.

Parents below par themselves frequently have unusual families. Parents who measure up to par often have offspring who lack pathogenic defense. Primitive man would have scouted the idea that a man with a hairless body and without a tail could rule the universe and that mechanical and chemical inventions of the brain could conquer brute forests and forest brutes.

Electricity has been harnessed somewhat to the means of man. Though we have the radio and the marconigram, we have not as yet isolated nor established the principle that makes for that attraction between the sexes for which both men and women will sacrifice all that is physical and material. Man has the same instinct in mating as the lesser animals. This law of biology holds taut to its secrets. From the

love philters of classic times to the so-called psychological lures of today the range is broad and long. But to this very hour in so far as exact science is concerned the matter pivots on this point, "Quien sabe?"

Wisely indeed has it been written, "Every dog fancier knows that man has the same instinct found in the lower animals to select a mate who is more or less different from himself. Species survive by selection of the average specimens as a rule for wide variations generally perish, and the only living animals are those which have inherited this tendency to mate with opposites. Wide variations do not even originate new species, for these arise by survival of types somewhat near the average. The same law governs man's survival. Should like types mate, their common characteristics may be so exaggerated as to be harmful and the line perish. Incest is unnatural because races die out from in-and-in breeding and surviving types are all descended from those who had opposite tendencies. Exogamy or the selection of mates from other tribes was the next step, and became universal for no other tribes were so vigorous, and consequently they perished. Ancient biblical moral laws against consanguineous and endogamous marriages are merely the expression of inherited instincts.

Mankind being then descended wholly from those who naturally marry their opposites, the present tendency is a natural law. It is an instinct for those of great intelligence to marry those of less than the average, for the offspring revert to the better average. Only occasionally do exceptionally able people marry their equals to produce those remarkable families, all of whom are noted. It is very evident that if we try to improve the race intellectually by the marriage of like types we will violate the natural law upon which our existence is based. As for men of genius, we must let happy accident produce them as it always has.

Comes also the danger of artificial selection. Oddly enough, Nature's laws being sufficient unto themselves, yet Nature seems to expect that they shall remain so. Penalty for transgression is inevitable. Penalty for tampering seems equally drastic. Soviet Russia seems not to have succeeded in sitting in judgment upon the laws of soul and body. Let space be given here to a

citation of comment about the once famous "Oneida community." Said this writer:

"Artificial matrimonial selection has been tried, though the results were disastrous. The Oneida community was based upon the idea that eugenics was a science. Unfortunately, the leaders failed to realize that the men and women who joined in such an abnormal life must have been abnormal themselves. Though they tried to select proper physical mates there was less attention paid to the mental and nervous side. The last report of the experiment was published some years ago and it merely referred to the expense saddled upon the state in caring for so many of the offspring in the public asylums. No further comment is needed except to remark that people who would violate instinct by following artificial matrimonial selection, are too abnormal, in our race, at least, to produce normal offspring. The only practical side of eugenics which concerns the medical profession is the fact that advice is now and then requested as to whether a certain proposed alliance is desirable. It is solely a question as to whether there is ability to fulfill the role and survive. Rarely is there any reference to the viability or vigor of the future offspring, but should it be a vital question as in royal marriages, it is settled upon a general survey of each family and eugenics is not involved in the least."

Biologists should investigate more definitely the tendency to be average or normal. No variation or modification from the normal is causeless. The abnormality will disappear in subsequent generations if this cause is removed. And in this respect let quotation be made again:

"This tendency to be normal is a biologic law of such paramount importance to physicians that it is astounding there is less heard of it. The influence of the environment in changing organisms is becoming more and more recognized, and heredity reduced to a mere tendency to do as the parent did in like conditions. It wholly explains why defective parents, if they live in a healthy normal manner, may produce fine offspring. The children have not been damaged as the parents were. Instead of excluding such parents from matrimony by eugenic theories, the whole trend of investigation must be in the direction of discovering and removing the causes of the defects. Personal hygiene must derive many rules from embryologic investigations. By advocating

proper methods of living we will do more good in the way of human stirpiculture than by tampering with matrimonial instincts."

IT SOUNDS LIKE AN EDITORIAL FROM THE ILLINOIS MEDICAL JOURNAL

THE DANGER OF A CENTRALIZED DESPOTISM IN
WASHINGTON, D. C.

At the meeting of the American Bar Association in Denver, July 15, the report of the committee on American Citizenship scored paternalism in government and stated that liberty is traded for United States alms.

BARTER RIGHTS FOR BOUNTIES

"The Roman citizens," it declared, "bartered their ancient liberties for bread and circuses. The American citizen today freely barter his individual liberties and rights for government bounties and bonuses. He demands government interference in everything and surrenders freedom and his individuality in return for it."

The listeners settled down in their seats with every evidence of enjoyment as the report continued: "The old virile spirit is waning to extinction. The American citizen is being pauperized by government alms.

"If he supports the government he asks the government in return to support him. If prices are too high, instead of doing without, he wants the government to lower them; if they are too low, he wants the government to raise them.

"He wants the government to build his roads, educate his offspring, sanitize him, physic him, bring his children into the world, prescribe his dietary, and tell him what to believe in matters of conscience.

FURTHERED BY STRONG GROUPS

"This tendency, constantly accelerated, is furthered by powerful groups, some of whom have selfish interests at stake, but by many whose leaders are impelled by the loftiest motives and seek them on the grounds of economic or social welfare."

These tendencies, the report said, are replacing representative government with an autocratic bureaucracy.

"It is apparent," it said, "that we are approaching the time when the states may be reduced to mere geographical expressions to the rank of counties, when all important powers will

be centralized in Washington, when the bill of rights will become a mere scrap of paper, and this government will come, as all other democracies have come, to a centralized despotism."

PRESIDENT COOLIDGE FEARS THE EX- TENSION OF AUTHORITY OF THE FEDERAL GOVERNMENT

No plan of centralization has ever been adopted which did not result in bureaucracy, tyranny, inflexibility, reaction and decline. . . . The states should not be induced by coercion or by favor to surrender the management of their own affairs.—President Coolidge's Williamsburg speech, May 15.

Discussing in this connection an "element of recent development," he said:

"Direct primaries and direct elections bring to bear upon the political fortunes of public officials the greatly disproportionate influence of organized minorities. Artificial propaganda, paid agitators, selfish interests, all impinge upon members of legislative bodies to force them to represent special elements rather than the great body of their constituency.

RUINOUS TO PEOPLE

"When they are successful, minority rule is established, and the result is an extravagance on the part of the government, which is ruinous to the people, and a multiplicity of regulations and restrictions for the conduct of all kinds of necessary business, which becomes little less than oppression.

WARNS OF CHAOS

"If the federal government should go out of existence, the common run of people would not detect the difference in the affairs of their daily life for a considerable length of time. But if the authority of the states were struck down disorder approaching chaos would be upon us within twenty-four hours. . . . Of all forms of government, those administered by bureaus are about the least satisfactory to an enlightened and progressive people. Being irresponsible, they become autocratic, and being autocratic, they resist all development.

"Unless bureaucracy is constantly resisted it breaks down representative government and overwhelms democracy. It is the one element in our institutions that sets up the pretense of having

the list. The following are at once apparent:

1st. The Illinois State Medical Society publishes a Journal that is ever on the alert to safeguard the people and the profession from the enactment of pernicious Medical Legislation.

2nd. The State Medical Society is officered by competent, alert and aggressive men who are at all times on the job and the rank and file of the profession is ever responsive to the recommendations of their officers and official family.

3rd. The state has a population of six and one-half millions of people, seventy-five per cent of whom possess brains and reasoning power sufficient to discriminate between the real and the bogus—the charlatan and impostor from the man of science.

LAUGHED THE CHIROPRACTORS' BILL TO DEATH. THE WONDERFUL HEALING POWERS OF THE BLACKSMITH.

The chiropractors and drugless healers lost their fight for state recognition in the recent session of the New York legislature when the Senate killed the Gibbs bill, a measure which would have permitted them to practice under strict supervision of the State Department of Health. The introducer of the bill urged its passage with considerable oratorical effect until he told of the wonderful healing powers of a blacksmith in his district. After that the bill was laughed to death.

FIND CHIROPRACTOR GUILTY OF VIOLATING MEDICAL PRACTICE ACT.

According to *Moline Dispatch*, July 8, 1926, Milo Grimes, Rock Island, Illinois, chiropractor, was found guilty by a jury in county court late yesterday of violating the medical practice act by practicing without a license.

The case was considered important and probably will be appealed to the supreme court. Chiropractors throughout the state are said to be interested and to have contributed toward a defense fund. Six other chiropractors await trial here as the result of an investigation made by the state department of health and investigation.

The chiropractors maintain they are being persecuted. State officials deny this charge.

One of the important elements in the trial of Grimes is reported to have been the testimony of Mr. and Mrs. Edward Cook, 2022 Fortieth street, Rock Island, who declared that Grimes had

treated their daughter and that she later died of diphtheria.

The penalty ranges from a fine of \$500 to a year in jail or both.

WANT LAW CHANGED

Grimes, who admitted that he had practiced without a license, said he had hoped to show that the present law is unfair because it provides an examining board of medical men rather than of chiropractors. He said he thought this might result in an acquittal and also in an amendment to the law.

Trial of the first of the other six chiropractic cases was started this morning. J. J. McGinley of Rock Island is the defendant.

According to Assistant State's Attorney D. H. McNeal, who is in charge of the prosecution of the cases, a conviction where a chiropractor practiced without a license has been carried to the supreme court and the law governing the licensing of chiropractors was declared to be constitutional by the higher court.

Note and comment: The verdict is a severe blow to the chiropractors. We are reliably informed that for weeks before the trial of the chiropractors by the Rock Island County authorities the cities of Rock Island, Moline and Silvis was flooded with hand to hand printed matter showing how the chiropractor is persecuted. It was evidently a campaign to educate prospective jurymen. Since the conviction of Grimes three other chiropractors were found guilty by Rock Island County jurors.

CHIROPRACTORS BEFOG THE REAL ISSUE. THE PEOPLE OF THE STATE DO NEED HEALTH PROTECTION.

Since the conviction of four chiropractors in Rock Island County for practicing Medicine without a license, the State has been flooded with chiropractic propaganda sent by the Illinois Chiropractic Research Bureau.

The following letter is a sample of misleading and untruthful statements being fed to the poor deluded and overburdened taxpayers.

ILLINOIS CHIROPRACTIC RESEARCH BUREAU

BOX 107, BELLEVILLE, ILLINOIS

Rock Island, Ill., July 19.—Money from the pockets of taxpayers of Illinois is being used to fight the battle of the medical fraternity of Illinois against chiropractic, according to charges made today by Dr. A. E.

Lill of Belleville, president of the Illinois Chiropractic Research Bureau.

"Medical men are attempting to stamp out drugless healers and public funds are being used to do it with," said Dr. Lill. "Under the guise of prosecuting practitioners for technically lacking licenses, they are attempting to halt competition and force the public back to medicine.

"This was proven in Rock Island when, during the past two weeks, more than \$1,500 of county funds were spent by the state in prosecuting four chiropractors for lacking licenses. This money came from a county already in dire financial straits. It came from citizens who have been taxed to the limit.

"Promotion of health was no issue in the trial of the four which took nearly two weeks. A venire of 24 jurors, at \$5 a day each, was required. Then there were the salaries of the judge, the state's attorney, court attaches, meals, light, and other expenses. The taxpayers paid the bill. Why? Not because the state needed protection. But because medical men were on the warpath against chiropractic.

"Not one bit of evidence was allowed in the trials as to the good the four defendants had done. No reflection was cast on the professional ability of the defendants. The medical forces merely charged, by using the state as a catspaw, that the four lacked licenses.

"Inasmuch as the medical men control all licenses and these four chiropractors were not even allowed to apply for a license, they were naturally found technically guilty. The fact that they had aided hundreds of persons back to health was not allowed as evidence.

"This same process is being repeated through the state. Medical forces are persecuting chiropractors with the use of state funds merely because the new profession has been unusually successful in getting results. Chiropractors resent this underhanded means of attack."

The four chiropractors who were found guilty were Drs. Milo Grimes, George J. Burgart, J. J. McGinley and John Lee. Dr. McGinley is one of the deans of the profession in Illinois and the other three are all prominent.

Note and Comment: Gossip has it that these are the cases that are going to the Supreme Court. We note that they are short, snappy and unencumbered. They are virtually a plea of guilty. "Yes, I practiced * * *. No, I had no license * * * the law is unfair so I took out no license, hoping both to be excused and to get the law changed."

NOW IT'S DONE

"Do you," the telephone company inquires, "observe the golden rule of party-line usage?"

"Absolutely; if the other party's talking, we jiggle the receiver hook and make wise cracks until he gets discouraged and quits."—*Buffalo Express*.

INTER-STATE POST GRADUATE ASSEMBLY OF NORTH AMERICA

Cleveland, Ohio, October 18-22, 1926

TENTATIVE PROGRAM

General Headquarters for all scientific sessions and Exhibits, Municipal Auditorium.

Hotel Headquarters: Hotel Cleveland.

On October 15th and 16th there will be pre-assembly clinics in the hospitals of Cleveland.

First Day, Monday, October 18, 7 A. M.

1. Diagnostic Clinic (Medical), Dr. Campbell P. Howard, Prof. of Medicine, McGill University Faculty of Medicine, Montreal, Canada.

2. Diagnostic Clinic (Surgical), Dr. George W. Crile, Cleveland Clinic, Cleveland, Ohio.

3. Diagnostic Clinic (Medical), Dr. Friedrich Mueller, Prof. of Medicine, University of Munich, Munich, Germany.

GYNECOLOGICAL SYMPOSIUM

4. Diagnostic clinic and address. Cases of Uterine Fibroids. The Rational Treatment of Tubal Disease, Dr. C. Jeff Miller, Prof. of Obstetrics and Clinical Gynecology, Tulane University, New Orleans, Louisiana.

5. Diagnostic clinic and address. Pelvic cases. Pelvic Infections, Dr. F. W. Marlow, Associate Prof. of Gynecology, University of Toronto Faculty of Medicine, Toronto, Canada.

Intermission

Review Exhibits

6. Diagnostic clinic and address. Pelvic cases. Displacement of Uterus and Vaginal Walls, Dr. Howard C. Taylor, Prof. of Clinical Gynecology, Columbia University School of Medicine, New York, New York.

7. The Contrasting indications for Surgery and Radiation in the treatment of Tumors of the Uterus, Dr. J. O. Polak, Prof. of Obstetrics and Gynecology, Long Island College of Medicine, Brooklyn, New York.

8. New Researches concerning Cyclic Processes in the Female Genital Organs, Dr. A. H. M. J. Van Rooy, Prof. of Obstetrics and Gynecology, University of Amsterdam, Amsterdam, Holland.

9. Uterine Hemorrhages; Causes and Control, Dr. Albert Doderlin, Prof. of Obstetrics and Gynecology, University of Munich, Munich, Germany.

Afternoon Session, 1 P. M.

PROBLEMS OF CHILD-BEARING—SYMPOSIUM

10. Sterility, Abortion and Miscarriage, Dr. Barton Cooke Hirst, Prof. of Obstetrics, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

11. Certain important Medical Complications of Pregnancy, Dr. William W. Herrick, Associate Prof. of Clinical Medicine, Columbia University School of Medicine, New York, New York.

12. Indications for Cesarean Section, Dr. Arthur H. Bill, Prof. of Obstetrics, Western Reserve University School of Medicine, Cleveland, Ohio.

13. Surgical Complications of Pregnancy; Appendicitis; Tumors of the Uterus; Tumors of the Breast;

Hyperthyroidism; Acute Ileus, Dr. George W. Crile, Cleveland Clinic, Cleveland, Ohio.

Intermission

Review Exhibits

14. Pyloric Stenosis in Infants, Dr. Richard W. Bolling, New York, New York.

15. Problems of Infant Feeding, Dr. H. J. Gerstenberger, Prof. of Pediatrics, Western Reserve University School of Medicine, Cleveland, Ohio.

16. Nephritis, Dr. Friedrich Mueller, Prof. of Medicine, University of Munich, Munich, Germany.

17. Problems in Orthopedic Surgery, Dr. N. Gurgel, Prof. of Orthopedic Surgery, University of Rio De Janeiro, Rie De Janeiro, Brazil.

Evening Session, 7 P. M.

CANCER—SYMPOSIUM

18. Carcinomata of the Buccal Cavity, Dr. Joseph Bloodgood, Associate Prof. of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

19. Is Cancer the Result of an Infectious Process? Dr. Francis C. Wood, New York, New York.

20. Demonstration of the Growth of Tissue by means of moving pictures, Dr. Alexis Carrel, Rockefeller Institute, New York, New York.

21. End Results of the Treatment of Cancer and the Factors determining them, Dr. Robert, Greenough, Assistant Prof. of Surgery, Harvard Medical School, Boston, Massachusetts.

Second Day, Tuesday, October 19, 7 A. M.

1. Diagnostic Clinic (Surgical), Mr. David P. D. Wilkie, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

2. Diagnostic Clinic (Medical), Dr. Henry A. Christian, Prof. of Medicine, Harvard Medical School, Boston, Massachusetts.

3. Diagnostic Clinic (Surgical), Sir William I. de Courcy Wheeler, Dublin, Ireland.

4. Diagnostic Clinic (Medical), Dr. A. Simonena, Prof. of Medicine, University of Madrid, Madrid, Spain.

GASTRO-INTESTINAL TRACT—SYMPOSIUM

5. Diagnostic clinic and address, Abdominal cases. Acute Abdominal Lesions, Dr. John F. Erdman, Prof. of Surgery, New York Post Graduate School of Medicine, New York, New York.

Intermission

Review Exhibits

6. Diagnostic clinic and address. Rectal and colon cases. Carcinoma of the Rectum and Colon, Dr. Daniel F. Jones, Boston, Massachusetts.

7. Dilatation of the Duodenum, Mr. David P. D. Wilkie, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

8. Surgical Indications and End Results of Operations for Ulcer of the Stomach, Sir William I. de Courcy Wheeler, Dublin, Ireland.

9. Surgical Indications and End Results of Operations for Cancer of the Stomach, Dr. Donald C. Balfour, Prof. of Surgery, University of Minnesota Grad-

uate School of Medicine, (Mayo Clinic), Rochester, Minn.

10. Intestinal Toxemia, Dr. Mariano R. Castex, Prof. of Clinical Medicine, National University of Buenos Aires, Buenos Aires, Argentina.

Afternoon Session, 1 P. M.

11. Medical Treatment of Ulcer of the Stomach, Dr. Franklin W. White, Boston, Massachusetts.

12. The Indications and Contra-indications for Surgical interference in cases of Duodenal Ulcer, Dr. Campbell P. Howard, Prof. of Medicine, McGill University Faculty of Medicine, Montreal, Canada.

13. The Achlorhydria group of Disturbances. (Presentation of cases), Dr. Henry A. Christian, Prof. of Medicine, Harvard Medical School, Boston, Massachusetts.

14. The Postmortem, Dr. Howard T. Karsner, Prof. of Pathology, Western Reserve University School of Medicine, Cleveland, Ohio.

Intermission

Review Exhibits

15. Address in Surgery, Dr. Ferdinand Sauerbruch, Prof. of Surgery, University of Munich, Munich, Germany.

OTO-LARYNGOLOGY—SYMPOSIUM

16. Dr. Perry G. Goldsmith, Prof. of Oto-laryngology, University of Toronto Faculty of Medicine, Toronto, Canada.

17. Dr. Samuel Crowe, Prof. of Oto-laryngology, Johns Hopkins University School of Medicine, Toronto, Canada.

18. Address in Surgery, Mr. Herbert J. Paterson, F. R. C. S., London, England.

Evening Session, 7 P. M.

STUDIES IN APPLIED ANATOMY

19. Treatment of Hernia, Dr. Carl A. Jamann, Dean and Prof. of Clinical Surgery, Western Reserve University School of Medicine, Cleveland Ohio.

20. The Alimentary Canal of the Medical Student—Radiographic studies, Dr. T. Wingate Todd, Prof. of Anatomy, Western Reserve University School of Medicine, Cleveland Ohio.

PHYSIOLOGICAL STUDIES

21. The Newer Physiology of the Gastro-intestinal Tract, Dr. Andrew C. Ivy, Department of Physiology, University of Chicago, Chicago, Illinois.

22. Present Knowledge of the Function of the Liver, Dr. Francis Peyton Rous, Pathologist, Rockefeller Institute for Research, New York, New York.

Third Day, Wednesday, October 20, 7 A. M.

1. Diagnostic Clinic, (Surgical), Dr. Dean D. Lewis, Prof. of Surgery, Johns Hopkins University, School of Medicine, Baltimore, Maryland.

2. Diagnostic Clinic (Medical), Dr. Hans C. Jacobaeus, Prof. of Internal Medicine, University of Stockholm, Stockholm, Sweden.

3. Diagnostic Clinic (Surgical), Dr. Harvey Cushing, Prof. Surgery, Harvard Medical School, Boston, Mass.

4. Diagnostic Clinic (Medical), Dr. James B. Her-

rick, Prof. of Medicine, University of Chicago School of Medicine (Rush), Chicago, Illinois.

5. Diagnostic Clinic (Surgical), Dr. William D. Haggard, Prof. of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

Intermission

Review Exhibits

RESPIRATORY AND CIRCULATORY DISEASES—SYMPOSIUM

6. Methods and Results in the Treatment of Empyema, Col. William L. Keller, Medical Department, United States Army; Surgeon-in-Chief, Walter Reed General Hospital, Washington, D. C.

7. Lung Abscess—Roentgenographic Aspects, Dr. Walter C. Hill, Cleveland, Ohio.

8. Lung Abscess—Surgical Aspects, Dr. Evarts Graham, Prof. of Surgery, Washington University School of Medicine, St. Louis, Missouri.

9. Practical Use of Thoracoscopy, Dr. Hans C. Jacobaeus, Prof. of Internal Medicine, University of Stockholm, Stockholm, Sweden.

Afternoon Session, 1 P. M.

10. Summary of Experiences up-to-date in the surgical treatment of Angina Pectoris, Dr. Elliott C. Cutler, Cleveland, Ohio.

11. Aortitis and Heart Failure, Dr. Roy W. Scott, Cleveland, Ohio.

12. Effects of Diseases of the Thyroid on the Heart and Their Treatments, Dr. Chrus C. Sturges, Peter Bent Brigham Hospital, Boston, Mass.

BRAIN AND CENTRAL NERVOUS SYSTEM—SYMPOSIUM

13. Ventriculography, Dr. Walter E. Dandy, Associate Prof. of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

14. The Present Status of our Knowledge of the Pituitary Body, Dr. Harvey Cushing, Prof. of Surgery, Harvard Medical School, Boston, Massachusetts.

15. Meningeal Adhesions and their Clinical Signs, Dr. Samuel Clark Harvey, Associate Prof. of Surgery, Yale University School of Medicine, New Haven, Conn.

Intermission

Review Exhibits

16. Teachings of Epidemic Encephalitis in regard to the General Physiology and Pathology of the Nervous System, Dr. August Wimmer, Prof. of Psychiatry, University of Copenhagen, Copenhagen, Denmark.

17. Results of Peripheral Nerve Lesions in Civil Life, Dr. Dean Lewis, Prof. of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Evening Session, 7 P. M.

ORTHOPEDICS AND RECONSTRUCTION SURGERY—SYMPOSIUM

18. Fractures of the Long Bones, Dr. William Darrach, Dean and Associate Prof. of Surgery, Columbia University School of Medicine, New York, New York.

19. Position of Orthopedic in Medical Instruction, Dr. Patrik Haglund, Prof. of Orthopedic Surgery, University of Stockholm, Stockholm, Sweden.

20. Attitudinal Strains. Presentation of Cases, Dr. Robert B. Osgood, Prof. of Orthopedic Surgery, Harvard Medical School, Boston, Massachusetts.

21. Orthopedic Management of Visceroptosis. Presentation of cases, Dr. Joel E. Goldthwait, Boston, Massachusetts.

22. The Arthritides, Dr. William S. Baer, Associate Prof. of Orthopedic Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

23. Reconstruction Surgery in Civilian Practice, Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto Faculty of Medicine, Toronto, Canada.

24. Transplantation of Foreign Bodies in Orthopedic Practice, Dr. Fritz Lange, Prof. of Orthopedic Surgery, University of Munich, Munich, Germany.

Fourth Day, Thursday, October 21, 7 A. M.

Diagnostic Clinic (Surgical), Dr. Arthur D. Bevan, Prof. of Surgery, University of Chicago School of Medicine (Rush), Chicago, Illinois.

2. Diagnostic Clinic (Medical), Dr. Mariano R. Castex, Prof. of Clinical Medicine, National University of Buenos Aires, Buenos Aires, Argentina.

3. Diagnostic Clinic (Surgical), Dr. Charles H. Mayo, Prof. of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota.

4. Diagnostic Clinic (Medical), Dr. Charles F. Hoover, Prof. of Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.

5. Diagnostic Clinic (Surgical), Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pennsylvania.

Intermission

Review Exhibits

GOITER—SYMPOSIUM

6. Diagnostic clinic and address, Goiter cases. Intrathoracic Goiter, Dr. Francis H. Lahey, Boston Massachusetts.

7. Diagnostic clinic and address. Thyroid cases. Cancer and Thyroid, Dr. Eugene H. Pool, Clinical Prof. of Surgery, Columbia University School of Medicine, New York, New York.

8. The Clinical Use of Iodin, Dr. Henry S. Plummer, Prof. of Medicine, University of Minnesota Graduate School of Medicine (Mayo Clinic), Rochester, Minnesota.

Afternoon Session, 1 P. M.

Minnesota.

GALL-BLADDER AND LIVER—SYMPOSIUM

9. Differential Diagnosis between Gastric and Duodenal Ulcer and Gall Stones, Dr. William D. Haggard, Prof. of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

10. Re-Study of the Bile Tracts, Dr. Arthur D. Bevan, Prof. of Surgery, University of Chicago School of Medicine (Rush), Chicago, Illinois.

11. The Hepatic Cirrhosis of Surgical Delay, Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pennsylvania.

Dr. Stanley P. Reimann, Prof. of Experimental Pathology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

INFECTIONS—SYMPOSIUM

12. Present Status of Serum Therapy in the Treat-

ment of the Exanthemata, Dr. J. G. FitzGerald, Prof. of Hygiene and Preventive Medicine, University of Toronto Faculty of Medicine, Toronto, Canada.

13. Recent Advances in our Knowledge of Pneumonia, Dr. Russell L. Cecil, Bellevue Hospital, New York, New York.

14. Syphilis of the Heart and Blood Vessels, Dr. Charles F. Hoover, Prof. of Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.

15. Infectious Endocarditis, Sir Thomas J. Horder, Bt., Prof. of Medicine, St. Bartholomew's Hospital and College, London, England.

Intermission

Review Exhibits

DIABETES—SYMPOSIUM

16. The Present Status of the Diabetic Problem. (Presentation of cases), Dr. Rollin T. Woodyatt, Clinical Prof. of Medicine, University of Chicago School of Medicine (Rush), Chicago, Illinois.

17. End Results in the Treatment of Diabetes in Children, Dr. Elliott P. Joslin, Clinical Prof. of Medicine, Harvard Medical School, Boston, Massachusetts.

Evening Session, 7 P. M.

DIABETES—SYMPOSIUM (Continued)

18. Physiological Basis for the Action of Insulin, Dr. J. J. R. Macleod, Prof. of Physiology, University of Toronto Faculty of Medicine, Toronto, Canada.

19. The Eye-Grounds in General Diagnosis, Dr. George E. DeSchweinitz, Prof. of Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

PROBLEMS OF POPULATION AND OF HEREDITY

20. Anomalies of Development, Dr. Charles H. Mayo, Prof. of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota.

21. Mechanism in Heredity, Edwin G. Conklin, Ph. D., Princeton University, Princeton, New Jersey.

22. Heredity in the Clinic, Dr. Lewellys F. Barker, Prof. Emeritus of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

23. Heredity and Cancer, Mr. William Sampson Handley, F. R. C. S., Surgeon, Richard Hollin's Cancer Research School; Middlesex Hospital; Women and Children's Hospital and Guy's Hospital, London, England.

Fifth Day, Friday, October 22, 7 A. M.

1. Diagnostic Clinic (Surgical), Mr. Archibald Young, F. R. C. S., Prof. of Surgery, University of Glasgow, Glasgow, Scotland.

2. Diagnostic Clinic (Medical), Dr. Lewellys F. Barker, Prof. Emeritus of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

3. Diagnostic Clinic (Surgical), Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minnesota.

4. Diagnostic Clinic (Medical), Sir Thomas J. Horder, Bt., Prof. of Medicine, St. Bartholomew's Hospital and College, London, England.

5. Diagnostic Clinic, Surgical, Mr. John M. C.

Fraser, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

Intermission

Review Exhibits

GENITO-URINARY TRACT—SYMPOSIUM

6. Diagnostic clinic and address. Genito-Urinary cases. Kidney Lesions, exclusive of Stones, Dr. Hugh Hampton Young, Clinical Prof. of Urology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

7. Diagnostic clinic and address. Bladder and Prostate cases. Bladder and Prostate, Dr. Hugh Cabot, Dean and Prof. of Surgery, University of Michigan School of Medicine, Ann Arbor, Michigan.

8. Diagnostic clinic and address. Cases of Stones in the Upper Urinary Tract. Stones in the Upper Urinary Tract, Dr. William F. Braash, Prof. of Urology, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

9. Classification of the Diseases of the Kidney from the Point of View of Progressive Treatment, Dr. Alexander von Koranyi, Prof. of Internal Medicine, University of Budapest, Budapest, Hungary.

Afternoon Session, 1 P. M.

DISEASES OF THE BREAST—SYMPOSIUM

10. Diagnostic clinic and address. Breast Cases. Tumors of the Breast, Dr. John M. T. Finney, Prof. of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

11. The Conservative Surgical Treatment of the Breast, Dr. L. L. McArthur, Chicago, Illinois.

12. Address in Surgery, Mr. John M. C. Fraser, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

13. Summary of Personal Experience in the Field of Abdominal Surgery, Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minn.

14. Summary of Personal Experience in the Field of General Medicine, Dr. James B. Herrick, Prof. of Medicine, University of Chicago School of Medicine (Rush), Chicago, Illinois.

Intermission

Review Exhibits

15. Address in Medicine, Dr. A. Simonena, Prof. of Medicine, University of Madrid, Madrid, Spain.

16. Address in Surgery, Mr. Archibald Young, F. R. C. S., Prof. of Surgery, University of Glasgow, Scotland.

17. General Therapeutic Methods of the Protection of Patients in the Extremes of Life, Dr. C. G. Jennings, Detroit, Michigan.

18. Blood Transfusion; Precise Indications, Blood Grouping, Choice of Methods, Dr. John L. Yates, Milwaukee, Wisconsin.

19. Anesthesia from the Standpoint of the Surgeon, Dr. George P. Muller, Prof. of Clinical Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

EVENING BANQUET

Addresses by Distinguished Citizens of the World.

NOTE: The following distinguished teachers and

clinicians from foreign countries have accepted tentatively to take part on the program but have not, as yet, sent in their subjects.

Dr. M. P. Bull, Prof. of Surgery, King Frederick's University, Oslo, Norway.

Dr. Rudolf Balint, Prof. of Internal Medicine, University of Budapest, Budapest, Hungary.

Dr. A. Carnot, Prof. of Therapeutics, Faculte de Medecine, Paris, France.

Dr. Milivoje Kostitch, Prof. of Surgery, Faculty of Medicine University of Belgrad, Belgrad, Jugo-Slavia.

Dr. J. Alves de Lima, Prof. of Surgery, University of Escola Polytechnics, Sao Paulo, Brazil.

Mr. Herbert J. Paterson, F. R. C. S., London, England.

Dr. Luis Tamini, Prof. of Orthopedic Surgery, National University of Buenos Aires, Buenos Aires, Argentina.

Physicians should make their reservations as early as possible by communicating with Hotel Cleveland or Convention Bureau—Cleveland Chamber of Commerce.

Program Committee

Dr. George Wm. Crile, Cleveland, Ohio, Chairman.

Dr. Lewellys F. Barker, Baltimore, Maryland.

Dr. George E. Brewer, New York, New York.

Dr. Henry A. Christian, Boston, Massachusetts.

Dr. John B. Deaver, Philadelphia, Pennsylvania.

Dr. Duncan A. L. Graham, Toronto, Canada.

Dr. James B. Herrick, Chicago, Illinois.

Dr. Jonathon C. Meakins, Montreal, Canada.

M. B. PECK,

Managing Director.

THE TREATMENT OF MEASLES BY IMMUNE SERUM

Dr. R. H. Cowley in *Therapeutic Gazette* in an article of the treatment of measles by immune serum says:

During the last two or three years a very large amount of research work has been done in the effort to find a solution to the measles problem. The brilliant results obtained by the Dicks and others in the conquest of scarlet fever inspired many to try what could be done to overcome measles. In a large institution like Berea College, where the students come largely from the mountains, measles is our worst enemy, for there are sure to be some 200 of our students who have not had it and no one has found a way of stopping it when it is once started.

Two years ago when measles broke out among our students I wrote to the Rockefeller Institute in New York asking if they had discovered anything new on the subject. They turned my letter over to Dr. W. H. Park of the New York City Health Department, and he wrote me saying that they thought they had some very important facts pretty well established but that they lacked the serum to carry on their research work. He said the serum must come from recent convalescents, and that since most of the adults had had measles they could find no source of supply. I wired him that we could supply the serum if he cared to

send for it. The upshot of it was that he sent Dr. Freeman to Berea, and we shipped 100 pints of convalescent measles blood black to New York. Dr. Park used this serum in the large hospitals for children and in homes of the city in the effort to find out if it were possible to stop a measles epidemic when it was once started. When the children of these institutions were exposed they were each given 3 cc. of the serum. If the exposure had been some time before the dose was increased accordingly. He found that in most cases this dose prevented the development of the disease, and in the cases in which it did develop it was of a very mild character. He treated in all nearly 1,000 cases, and there were no complications in any of them. He wrote me of the results of his work last year and asked for more serum, but we had no measles and could not supply him.

This year the disease broke out in Berea again, and I wrote him immediately asking for full particulars as to how to collect and administer the serum. He was kind enough to send me directions, and we took blood from our first cases and used it on the subsequent cases.

The method employed for collecting the blood is as follows: Into a sterile bottle holding 500 cc. is put 7.5 grammes of sodium citrate dissolved in 15 cc. sterile water and 0.5 gramme chinisol dissolved in a like amount of water, and the blood is drawn into this bottle as follows: A piece of soft-rubber tubing is clamped around the arm above the elbow tight enough to stop the venous but not the arterial circulation. The veins should stand out prominently, but the pulse be definitely palpable. A drop of novocaine is injected intradermally over the vein and a small incision made with a very fine knife, as the needle to be used must be of large caliber to prevent clotting. The blood is drawn into the bottle and shaken thoroughly and then placed on ice. While the needle is in the vein enough blood is drawn into a small tube for the Wassermann test. If the bottle cannot be filled from one person it should be filled from another, so as to have the chemicals in the proper dilution, and when the corpuscles are settled the serum should be drawn off with a large sterile syringe and put into a sterile bottle when it is ready for use. We used routinely 3 cc. injected under the skin on the abdomen just as soon as we were sure from the Koplik spots that the case was one of real measles. In the 156 cases we had no serious complications, and the time of the disease was materially shortened. Where the symptoms were very severe we gave 5 cc. and in about six cases we repeated the dose, when the first dose did not seem to be sufficient. I have been treating epidemics of measles here among the students for twenty-two years and so have a pretty wide background to judge from, and I feel sure that in convalescent serum we have a solution for the measles problem until such time as a vaccine or horse serum antitoxin is perfected.

We did not use the serum with the same purpose as Dr. Park did. Our idea was that if we tried to stop the epidemic it would take a large amount of serum, and those treated would be immune for not more than

a month. We therefore waited till the students came down with the disease, and then give them enough serum to prevent complications, but still be sick enough to develop a sufficient immunity. We decided on 3 cc. as the initial dose, increasing this dose to 5 cc. in cases in which the temperature was high or the patient appeared very sick. In about six cases a second dose was given where it was seen that the first dose had not modified the symptoms sufficiently. On the other hand, we found that some of the cases recovered so quickly that it is doubtful whether they will have very much immunity. One boy with a temperature of 104.8° was given 5 cc., and the next day the temperature was normal and the eruption was all gone. He was perfectly well. Another case, with a temperature of 104°, very severe cough, and great prostration, was given 5 cc. She was some better the next day, but on the third day had a chill and beginning pneumonia. We gave her a second 5 cc., and the day following her temperature was normal and she was well. We had several similar, apparently desperate cases which were relieved at once.

Another patient had pneumonia of the unresolved type with the temperature hanging around 104° for a long time. When the temperature finally went to normal he was very weak and emaciated. After he had run a normal temperature for several days his temperature went up again, his ears began to run, and the mastoids were very tender. After several days of this with gradual loss of strength he broke out with measles. Because of his weak condition we gave him 6 cc. of the serum, and the next day his temperature was normal, his ears had cleared up, and he seemed much better. After several days the temperature went up again to 103.8°, the ears again began to run, and the mastoids were so tender that we could hardly touch them. Thinking that this might be a complication of the measles and not knowing what else to do we gave him 10 cc. of the serum. The next day the picture was entirely changed for the better, and he was soon convalescent.

Reports of individual cases seldom prove much especially in a disease like measles, which in uncomplicated cases runs a quite definite course and stops by crisis. We therefore compared the charts from the epidemic of two years ago with those of this year to see if we could prove by actual figures what we were almost certain of from observation. The following tables show this comparison:

	1924	1926
Average temperature on day of admission to the hospital.....	102.2°	102.3°
Average of the highest temperature reached by each case.....	103.9°	102.3°
Average No. of days in the hospital with temperature	5.64	3.2
Average No. of days in hospital.....	10.12	5.64
No. of cases with temperature above 104° after first day.....	43	11
Percentage of cases whose temperature increased after the first day.....	73%	44.5%

Next are given the average highest temperatures on the successive days:

	1st	2d	3d	4th	5th	6th	7th
	deg.	deg.	deg.	deg.	deg.	deg.	deg.
1926	102.3	101.8	100.4	99.2	98.7	98.6	98.6
1924	102.2	102.8	101.1	100.9	100.7	100.4	100.5

Next are given the temperatures of 104° or over which occurred on the various days:

1924							1926			
Days	1st	2d	3d	4th	5th	6th	1st	2d	3d	4th
104	3	6	7	1	1	1	2	4	2	
104.2	1	2	1	1			5	1	1	
104.3		5	1				1			
104.6	1	4	2				1			
108.8		1	3	3			2		1	
105		2		1				2		
105.4			1							
105.6	1									

The above table shows that after the first day, which of course couldn't be influenced by the serum treatment, there were, in 1924, 43 cases in which the temperature went to 104° or over, while in 1926 there were only 11.

These statistics are compiled from about 75 cases in each epidemic. We had in all 165 cases this year, with no serious complications.

In addition to the tangible benefits which can be shown by figures there were others which were quite evident to us who had charge of the cases, and who had for years been in charge of epidemics of measles of the old-fashioned kind. This was especially noticeable where the cases were grouped in wards of 25 beds each. In former epidemics the coughing was the most distressing symptom, and was incessant and terribly rasping in character. This year there was almost no coughing. Of course we had no serum for the first few cases, and the nurses noticed the change in the coughing as soon as the first serum was given. Another thing noticeable was the almost total absence of earache. In former epidemics nearly half of the cases had more or less earache, and there were large numbers of running ears. In one epidemic I did 12 mastoid operations when it was over. This year we had a few running ears, but they were very few and there were no mastoid operations. In former epidemics there were always some cases of pneumonia. This year we had two which seemed to be developing pneumonia, but they cleared up over night with the second dose of the serum. The lack of eye trouble was also very noticeable. Usually many students have to go home after the attack of measles because they cannot use their eyes. This year there has been almost no such complaint. It must be remembered too that we used very small doses of serum. When our next epidemic comes I plan to follow a somewhat different course. I shall give each case as it comes in 3 cc. if the temperature is 102° or under; if it is 103° I shall give 6 cc.; if it is 104° I shall give 10 cc. I shall watch these cases daily, and if one of them does not improve satisfactorily I shall give more of the serum daily till the disease abates. In this way I feel sure that all complications can be effectually prevented.

CERTIFIED AND PASTEURIZED MILK

An investigation recently conducted by Maynard Ladd, Helen Evarts and Lucile Franks of the relative efficiency of Certified and Pasteurized milk in Infant Feeding led to the conclusions that the use of certified milk (raw) without orange juice or cod liver oil gave a considerably greater percentage of weight development than either pasteurized milk alone or pasteurized milk with orange juice and cod liver oil. Its protective properties against rachitic changes, as shown by radiograph, were clearly demonstrated, and dentition developed normally. It is quite possible that the greater efficiency of certified milk over pasteurized milk is due to the more exact and scientific feeding of the cows in the particular supply of certified milk used and not to the quality of rawness. If this should be proved to be the case, it would not necessarily follow that a similar superiority of results over pasteurized milk would obtain in all certified milks. The use of orange juice and cod liver oil as a matter of routine in all babies over three months of age, however fed, is therefore probably well justified—even though there is reason to believe that the highest grades of certified milk are sufficiently protective—but in their opinion a larger use of certified milk in infant feeding should be encouraged by the medical profession.—*Arch. Ped.*, 43: 380-385 (June 3, 1926).

TREATMENT OF LEUKEMIA BY INOCULATION OF MALARIA

T. Lucherini gives details of a case of leukemia successfully treated by the inoculation of malaria, 3 c. c. of blood from a malarial patient being injected subcutaneously. The case was that of a boy aged fourteen, his blood examination showing 250,000 leukocytes (73 per cent myeloblasts), and 1,500,000 red blood corpuscles, hemoglobin 24 per cent. After twelve successive attacks of malaria he was treated with quinine, and a month later his blood examination showed leukocytes 5,800 red blood corpuscles 3,880,000, hemoglobin 52 per cent, his general condition being greatly improved.—*Il Policlinico*, 32: 1745-1747 (December 14) 1925; abs. in *The Practitioner*, 116: 433-434 (June) 1926.

WHEN MAY ONE SPEAK OF THE CURE OF SYPHILIS?

Charles Fauquet, M. D., of Paris, France, in the July number of the *Urologic and Cutaneous Review* comments on this subject in detail. We quote:

Can this question which presents itself anxiously to every individual tainted with syphilis, which also presents itself to physicians for their patients' sake and which Prof. Fournier has chosen as the title of one of his articles (When is one cured?) receive an answer at the present time? It is this that I would study in these few pages based upon the most recent work of our specialists.

Syphilis, as we know, is a chronic disease the evolution of which, sometimes very long, is marked by periods of latence during which the syphilitic individual presents no visible symptoms, no disturbance

and appears to enjoy the most perfect health. These periods of latence, the duration of which is very variable, are interrupted occasionally by the appearance and the return of symptoms which give no sign by which they may be anticipated, the gravity of which may be very great (aortitis, aneurism, tabes, general paralysis, etc.). Cases have been observed where a syphilitic individual after living 20 or 30 years without symptoms has shown a sudden recidivation of cutaneous or mucous syphilids. A married syphilitic individual after having many healthy children has borne one or two children plainly heredosyphilitic (Majocchi, Pellyzari), or has shown gummatous lesions, a fact which shows that the infection was not cured but was merely in a quiescent stage.

How is it possible to explain these periods of mutism in syphilis? Should one think as Commasi, of a cyclic biological involution of the treponema more or less analogous to that of the plasmodium of malaria? But nothing seems to permit of this hypothesis, for no one has demonstrated morphological aspects of the parasite different from the spirillum discovered by Schaudinn. Can it be admitted that the treponemata, weakened in virulence either by treatment or by the natural defensive power of the body, conceal themselves in certain organs or in the cicatrices of old lesions where they live in a parasitic state with their virulence so attenuated that they are incapable of procoking a clinical sign or a reaction in the tissues which they inhabit?

This last hypothesis seems to us nearer the truth. Some authorities have been able to bring evidence of treponemata remaining latent in the cicatrices in cutaneous pigmentations following syphilitic lesions in evolution. Neisser succeeded in infecting the peritoneum of apes by inoculation with extracts of organs of animals in the latent stage of syphilis (bone marrow, spleen, liver).

Can it be also that the body is able to engulf the treponemata at the stage of life when they are covered with fatty substances which prevent their injurious action for a certain time upon the organism of which they are the guests?

We are also ignorant of the influences causing the awakening of the treponemata and their resumption of virulence. It has been claimed that local traumatism is the cause (Varnowsky, Pasini, Vignolo-Lutati, Gougerot, Lingmann), also a diminished resistance of the body due to an intercurrent disease (influenza, Pellizzari) or a specific treatment which was too weak awakening the parasite instead of destroying it (Gennerich, Herxheimer, Vernes, Queyrat). The hypothesis has also been advanced that the presence in the body of numerous virulent treponemata leads to the formation of immunizing substances which act in destroying or attenuating the treponemata which disappear from the circulation and assume a latent form of life in the organs where these substances have less power to act upon them (dead angles of Ehrlich). Ebersson asserts that the serum of an old syphilitic has an inhibiting action on the movements of the treponemata, an action which the serum

of an individual affected with active syphilis does not possess.

One may admit with numerous authorities that these immunizing substances or antibodies present in certain individuals are sufficiently abundant and active to cause the complete disappearance of the parasites and produce the cure of syphilis spontaneously. This complete disappearance of the treponemata, it is logical to admit, may be obtained in certain cases by sufficient early and intensive treatment.

This seems to follow from the very large number of re-infections which have been reported from different countries since the introduction into the therapy of medicaments as active as the arsenobenzenes. Cases of re-infection have even been noted after very short treatments, generally considered as insufficient (Pellizzari, Sensini, Brossarello). Tommasi cites the case which he presented at the XVIII meeting of the Italian Society of Dermatology and Syphilography of a patient who had received only 1.80 grams of mercury in 18 months of treatments and who had a re-infection a short time thereafter. Milian and Lafoureada reported the observation of a patient who recovered from a first attack of syphilis after four injections of novarsenobenzol (2 of 0.30 cg. and 2 of 0.45 cg.) and one single injection of a soluble salt of bismuth. Eight months afterwards a new infection was noted, a re-infection which the authors regarded as undoubted.

Loccapere also reported a case of syphilis cured by one single intramuscular injection of 0.60 cg. of 606; ten years later this patient had a re-infection. Sabauraud cited a case of the same kind and concludes that "primary syphilis treated without delay is rapidly curable and this in a great number of cases." One may admit *a priori* that syphilis can get well. In what does the cure of syphilis consist? We cannot do better than recall the definition given by Commasi: "The cure of syphilis" he writes, "is the sterilization of the disease, the death and the disappearance of all the treponemata in their known form and their eventual forms, not overlooking the resistance or the superficial or deep saprophytism in the circulation or in foci more or less hidden or nests of latency."

In admitting that the cure of syphilis is realizable, have we an infallible means of knowing and of being able to certify that a syphilis is cured and is not merely offering a period of latency or mutism?

The age of syphilis does not seem to have a great importance since one sees sufferers who are taken late with symptoms often contagious after a latency of many years (13 years in one case of Fournier; 50 years in another case of Balzer and Levestra). Nevertheless, the more remote one is from the beginning the more it seems one may visualize the possibility of a cure.

It is the same with the *gravity of the infection*. It is moreover difficult to evaluate this gravity. Does one base one's opinion upon the repetition of the symptoms or upon their gravity? Is a syphilis which reveals itself in numerous cutaneous or mucous manifestations more grave than a syphilis which attacks the nervous system? The rapidity of the clinical and

serological recidivation in spite of a normally conducted treatment, should make one think of a serious syphilis. It is the same with more or less precocious symptoms generally considered as tardy (gummata, visceral lesions) and in the resistance of a positive serological reaction to pass over to negative.

The treatment of the patient constitutes a more solid argument if it has been serious and sufficiently prolonged. But does one not observe syphilis which resists the most properly conducted treatment?

The *general condition of the patient* has also a certain importance. It is evident that in order for one to be able to speak of a cure the patient should not present any symptoms in evolution nor have presented any for several years. A complete clinical examination of the subject is then necessary without forgetting the heart and vessels (auscultation and radioscopy), the investigation of the reflexes, of the arterial tension and even the search for the treponemata in the lymphatic ganglia.

We now come to two most important criteria: The serological examination of the blood and the thorough examination of the cephalo-rachitic fluid.

Interrogation and clinical examination do not enable us to decide. Will the serological examination do any more?

1. What value has a *positive* seroreaction during the course of an asymptomatic syphilis? We do not share the opinion of certain authors who think that a positive reaction is proper at this period because it signifies the presence of antibodies in convalescence. For us and for the great majority of syphilologists a positive seroreaction in the course of an asymptomatic syphilis denotes syphilis in activity and consequently not cured.

2. What is the value of a negative seroreaction in the course of an asymptomatic syphilis?

a. If it is a matter of recent syphilis a *negative* result cannot serve as a basis. One sees frequently—without the influence of treatment—theseroreaction becomes negative and later turn to positive.

Fruhwald has shown by the inoculation of animals the contagiousness of the blood of certain syphilitics who may have a negative Wassermann.

b. If the matter is one of old syphilis dating back to three years and more the seroreaction may have a very great importance. At this period according to statistics the Bordet-Wassermann is positive in about 30 per cent of cases, negative in 70 per cent. But among the latter 19 per cent of cases vary in reaction, becoming again positive with or without clinical manifestations. Consequently the negative character of the reaction does not permit the assurance of a cure, but it may be an important presumptive sign.

A positive reaction is considered as a symptom of syphilis, a more sensitive sign than the clinical symptoms, for very often the reaction becomes again positive before the return of clinical symptoms. Commasi correctly compares it to the indicator of an apparatus which amplifies and makes visible the presence of symptoms which clinically are not perceptible to our senses. It is the bob of a pendulum which renders our

clinical perception more acute to discover the existence of manifestations which are invisible by our ordinary means of investigation.

All of this applies to the serological procedure most commonly employed, the Bordet-Wassermann reaction. But sometimes the results of this reaction are insufficient and more sensitive methods have been sought for. Unfortunately, every augmentation of the sensitiveness is accompanied by a corresponding diminution in the specific character. It is now the practice to check up the Bordet-Wassermann with other tests (Hecht, Jacobsthal, Demonliers, flocculation procedures, etc.).

Among the flocculation procedures we give preference to the syphilimetric method of A. Vernes, Director of the Prophylactic Institute of Paris. It has the great advantage of being the most precise method. It gives constant and identical results even in the hands of different serologists in different laboratories, which no other serological methods do.

Instead of seeking to augment the sensitiveness of these serological techniques, it has been sought to sensitize the patients in some manner. *Reactivation* and *provocation* have been employed for this purpose.

Reactivation (Gennerich, Milian) is a phenomenon analogous to the Herxheimer reaction.

Provocation (Vernes) is based upon the phenomenon of revivification or lighting up of latent foci of infection present in consequence of an insufficient course of treatment.

The object of these two methods is to obtain a serological exaltation. The results have certainly a greater importance than those afforded by sero-reactions alone, nevertheless they do not suffice to determine the cure of syphilis.

The examination of the cephalo-rachitic fluid is the indispensable corollary to the serological examination of the blood. The possibility of having a blood-negative seroreaction with a positive seroreaction of the cephalo-rachitic fluid has necessitated the practice of lumbar puncture when one would know if a syphilitic may be considered as cured.

A few years ago great hopes were based upon the cutis and introdermal reaction to facilitate the diagnosis of the recovery from syphilis. In fact, the employment of these procedures with the *Syphiline* of Meirowsky, the *Luetine* of Noguchi, of *Pallidine* of Fischer Klausner, has been little by little completely abandoned in consequence of the inconstancy of the results, and their contradictory character.

From all of that which goes before, what may one conclude? There does not exist as yet one single clinical or laboratory sign capable of certifying that an individual once tainted with syphilis is definitely free from his affection. This is not to say that syphilis is not curable. Almost all syphilologists commencing with Fournier, admit that the cure of this malady is possible. Comassi indeed says this "termination is the most common for well treated patients." Syphilis treated energetically at the prehumoral stage in particular, gets well almost always. Boas speaks of 231 cures in 284 cases treated under these conditions. The patient cited by Carnowski who having acquired a

chancre at the age of 8 years, ceased to have recurrences after 15 years and was always well and vigorous up to his 81st year, could well be considered as cured. Artz gives a percentage of 85 per cent of cures, Foland of 40 to 90 per cent, Lesser 100 per cent.

If we have not the scientific proof permitting us to deliver to an individual a certificate of the cure of syphilis, we have nevertheless often a group of clinical and laboratory signs which constitute, when they are taken together, an important array of presumptions, permitting the belief that recovery has been obtained. This is the case of those syphilitics in whom the infection dates back many years who have not presented any symptoms for several years, who have had a certain number of negative blood sero-reactions during two or three years and who have persistently a normal cephalo-rachitic fluid. It would well appear that one could permit marriage and procreation to such as these.

THE DOCTOR'S PLAYTIME

As a class, doctors do not play enough. Their hours are long, their work depressing, and their opportunity for reaction scant. Their leisure time is apt to be devoted to medical meetings, perusal of medical literature, or study of one kind or another. Their friendships are largely among men of their own profession—when, indeed, they have time to give to friends—and all their activities center around their work.

Yet it must not be forgotten that every man needs recreation and rest if he is to remain healthy and preserve a sane attitude of mind. That "tired feeling" is more apt to come from "staleness" than from over-activity. Among no other class of professional people is a rested body and a clear mind more essential than with the men on whom other folk's lives so often depend. The doctor owes it not only to himself and to his family, but to his patients to care for his own well-being.

A hobby totally removed from the world of medicine is a most excellent thing for any physician to develop. In Paris recently the "Salon des Médecins" presented examples of paintings and sculpture executed by physicians. It was a good idea, and one worth developing in this country. Other men find their outlet in church work, clubs, golf, gardening, and varied activities. It matters not so much what vent the play instinct may have, it is the having *something* outside the regular routine to occupy the leisure hours pleasantly that is necessary to a well balanced and normal life.

The physician is about the only professional man who is on call all the time, day and night, and in this period when the eight-hour day has been recognized as practically standard for the laborer, it would appear justifiable for doctors to consider some plan that will give them certain hours for their own without fear of being disturbed. This has been one of the strong appeals of the specialties, for the specialist can regulate his hours of work better than can the general practitioner. It is also one of the strongest arguments in favor of group medicine. The members of a clinic can take their turn attending to the night work, so

that all will have some opportunity to devote to their physical and spiritual betterment—in other words, to play.—*The Atlantic Medical Monthly*.

CURE OF NOMA WITH SULPHATE OF COPPER

F. Kaspar, writing in the *Wiener klinische Wochenschrift* of May 6, 1926, claims to have cured a case of noma by the simple use of a solution of copper sulphate. He was led to test this remedy because in his bacteriological work he found that it arrested the growth of Vincent's fusiform bacillus, now recognized as at least one cause of this dread disease. This one result he regards as sufficiently brilliant to report, but he has since learned that he has been anticipated in the use of the remedy by modern Russian physicians who have cured a considerable number of cases. The 10 per cent aqueous solution is used. Application of this solution to the gangrenous area of the cheek was followed in the author's case by the formation of a line of demarcation announcing that the disease process had been arrested. The author regards the Vincent fusiform bacillus acting alone as the cause of but one type of noma. In other cases the symbiosis of this organism with a spirochete appears to be the cause, and in this type the author fears that the copper solution might not cure as it has no power over the spirochete. Under these conditions he would add salvarsan locally and intravenously and would expect a cure. Salvarsan in turn has no power over the fusiform bacillus. The latter when it occurs in noma has an astonishing polymorphism and its simulation of other pathogenic bacteria has probably led to reckoning some of these as able to cause the disease. As a matter of fact it is by no means unlikely that quite different organisms can produce the same gangrenous affection in the poorly nourished children who contract it. The author's patient chanced to be an adult, which is an extremely rare coincidence, for of 413 cases collected by Bruns only 11 were in individuals over 15 years of age. In the author's case the two others quoted by him, also in adults and both fatal, the noma followed extraction of a tooth. The mortality of the disease in the past has reached 80 per cent, but recent cases are showing an improvement on this figure.

TREATMENT OF CERVICAL CATARRHS WITH ANIMAL CHARCOAL

Fr. Chr. Geller (*Zentralblatt für Gynäkologie*, January 16, 1926) asserts that specific therapy is usually directed toward the vagina in catarrhs of the uterine cervix, and this is the very reason why such treatment is often unsuccessful. The cervix itself is much too often neglected. This neglect of the cervical mucosa is based upon the fear of spreading the infection after intracervical therapy. But this danger has been too much overestimated. The menstrual hyperemia, desquamation and regeneration of the mucosa is a powerful factor in the prevention of the spread of the infection.

Urged on by the favorable results of the so-called biological therapy of leucorrhea, the author has at-

tempted to treat this condition most conservatively by making the bacteria and their toxins innocuous and eliminating them. The intracervical methods of treatment used heretofore have the disadvantage that they injure the cervical mucosa either mechanically (curettage), thermically (cauterization) or chemically (cauterization by chemicals) and so reduce the natural powers of resistance of the tissue. The author has tried an indifferent therapy patterned after the power insufflation of the vagina and the bolus and charcoal treatment of infectious intestinal catarrhs. The curative power of the pulverized animal charcoal is due to the marked adsorption of the bacteria and their toxins and of the wound secretions. Not only are the bacteria sucked up, but the conditions of life for bacteria are made difficult by the simultaneous drying of the tissues. There is no injury to the cells of the tissues and a hyperemic stimulus upon the tissues is exerted by the abstraction of water.

The only indication for this form of treatment is chronic cervical catarrh. The cases should be carefully selected. Positive gonorrhea is a contraindication, as is also adnexal inflammation.

For the insufflation of the powdered charcoal the author has devised a special cervix powder blower. The instrument and the charcoal must be sterilized. The technic or insufflation is the following: The patient and the physician are prepared as for a curettage. About a quarter of a teaspoonful of powdered charcoal is placed into the insufflator. The vagina and cervix are disinfected and dried as much as possible. The cervix is dilated with a Hegar dilator and the insufflator is immediately inserted into the cervix. Two or three pressures are then made on the hand bulb, after which the insufflator is withdrawn.

COMMENTARIES ON GONORRHOEA.

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It is not to be expected that anything new or startling can be presented in this contribution to the already existing voluminous literature concerning a disorder which probably antedates the history of humankind. Were the ancient code of Hammurabi (2250 B. C.) available for perusal, doubtless therein might be discovered many interesting data anent the "running issue of the flesh" which centuries later became familiar to students of biblical lore. The papyrus of Ebers (exact period uncertain) is said to contain an accurate description of the malady, the various complications and sequelae which under certain circumstances might be expected to ensue, and also local and general therapeutic measures indicated for possible alleviation or cure. Practically every ancient medical historian, whose writings are available for review, discusses in no uncertain terms the pernicious and oftentimes disastrous effects of "the venereal," thus demonstrating that the importance of the disease, in relation to individual life and health, has been recognized since the earliest historical record.

In the not far distant past someone facetiously

observed that "amorous conquests, seemingly full of poesy, oftentimes ended in prosaic injections of sulphate of zinc or doses of copaiba." While the inherent accuracy of this adage remains unchanged, upon the basis of accumulated information certain additions seem requisite, viz., the urethral introduction of silver nitrate (injections, instillations, pencils, crayons, etc.), the injection of solutions of bismuth, formalin, potassium permanganate, "kerosene," the various silver salts, and hundreds of other drugs of doubtful efficiency, in various combinations and dilutions; the internal exhibition of oleum santali, oleum terebinthina, belladonna, bromides, methylene, blue, hyoscyamus, etc.; the local application of sinapisms, stupes, cataplasms. Nearly every drug included in the revised pharmacopeia has at some time been recommended for external or internal administration in the attempted alleviation or cure of gonorrhea, but so far as at present known no drug nor combination of medicinal agents has proven satisfactory, curative, and universally applicable. Noeggerath declared that men never recovered from gonorrhoea, and that nine-tenths of the women who married men who had been thus infected developed painful and incurable inflammatory lesions of the uterus, oviducts, and ovaries. Many other older observers expressed similar pessimistic views which are now known to be only partially true. The facts remain, however, that despite treatment by the most modern methods the disorder not infrequently persists many months, with remissions and exacerbations of symptoms, passing almost imperceptibly from the acute to the chronic stage, involving successively the posterior urethra, the prostate gland, the epididymes, the seminal vesicles, sometimes the testes, the bladder, and the renal structures. (Very, very rarely the bladder or kidney involved in a true gonococcal process. Editor). The reason for chronicity in the majority of instances is not inaccuracy of the medical attendant in the exhibition of medicinal agents nor inattention of the patient, but the impregnability of the regions involved. Owing to the anatomical arrangement of the urethral and prostatic structures the "enemy may entrench himself" therein and exist indefinitely in comparative safety, because the regions present innumerable fortresses impregnable to either external or internal influences. If antiseptic or germicidal drugs locally applied could by any possible means be made to reach the deepest recesses of the enemy's stronghold without inflicting perhaps irreparable damage upon the host, that method of management might be efficient, sufficient, satisfactory, and universally successful; but can the most optimistic observer state with any degree of veracity that such an eventuation may be reasonably contemplated in every instance? Internal medication, through the media of the blood and urine, must remain of questionable utility; the internal administration of drugs in the treatment of gonorrhoea, in so far as the specific action of such agents is concerned, practically represents an unknown or at least an uncertain quantity. Yet there

are otherwise apparently intelligent practitioners of medicine who contend that the disorder may be cured by the internal exhibition of drugs unaided by local measures. Such practitioners have been known to inform patients that gonorrhoea was a trivial affair and could be cured within a few days or weeks. On the contrary, however, it is believed there is abundant evidence to substantiate the statement that gonorrhoea is one of the most obstinate, persistent and formidable disorders the physician is called upon to treat, and that the complications and sequelae which may ensue are numerous and oftentimes dangerous to life. The following incomplete list of possible sequelae are offered in proof of the foregoing assertion:

COMPLICATIONS AND SEQUELAE OF GONOCOCCAL INFECTION IN MALES AND FEMALES.

MALES		
Chordee,	Phimosis,	Paraphimosis,
Balanitis,	Balanoposthitis,	Cowperitis,
Prostatitis,	Prostatic abscess,	Seminal vesiculitis,
Epididymitis,	Orchitis,	Stricture of Urethra,
Exostosis.		
		Peritonitis,
		Proctitis,
		Sterility,
		Arthritis,
		Perirenal abscess,
		Uremia,
		Urinary retention,
		Iritis,
		Neuritis,
		Myelitis.
		FEMALES
		Vulvitis,
		Bartholinitis,
		Vaginitis,
		Vaginal ulceration,
		Endocervicitis,
		Endometritis,
		Metritis,
COMMON TO BOTH SEXES		
Urethritis,		Salpingitis,
Urethral abscess,		Pyosalpinx,
Oocystitis,		Ovaritis,
Pyelitis,		Hydrosalpinx,
"Surgical kidney,"		Hematosalpinx,
Pyemia,		Ectopic gestation,
Ophthalmitis,		Hematocoele,
Urinary suppression,		(a) extraperitoneal,
Pelvic abscess,		(b) intraperitoneal,
Inguinal adenitis,		Puerperal septicemia,
Endocarditis,		Adherent placenta.

Careful scrutiny of such an array of possibilities should certainly be sufficient to contravert the erroneous prevailing impression that gonorrhoea entails no serious consequences to those who may become its unfortunate victims. The claim is not made that complications and sequelae are unpreventable, nor that any of them will necessarily supervene during either acute or chronic gonorrhoea, but they represent possibilities which must be considered in estimating the morbidity and mortality incident to an exceedingly common affection still regarded in some quarters of minor importance, self-limited, or curable within a few days. It is noteworthy that the germs of Neisser have been isolated and demonstrated in infected tissues regardless of the anatomic situation from which extirpated, thus completing positive etiologic and pathologic findings.

An interesting but unfortunate commentary has already been suggested, i. e., there are still physicians who positively assert gonorrhoea is purely local and self-limited from which the patient may be expected to recover within a reasonable time (with or without treatment) provided quietude in the recumbent position be enjoined. If the writer be not mistaken a statement in practical accord

with the foregoing appeared in a textbook on venereal diseases compiled but a few years ago. If the author ever corrected his obviously erroneous assertion it has escaped notice. False statements by physicians or others in text books and elsewhere with respect to venereal disease, whether made deliberately or otherwise, are always productive of harm. Truth and not falsehood is demanded by the public, and this especially applies to venereal reservation. The words "syphilis" and "gonorrhoea" are no longer unfamiliar and need not be whisperingly uttered before public gatherings. Lectures concerning the evils and dangers incident to social diseases have even been delivered from pulpits during the educational campaign which has been in progress, and it is hoped much benefit from a public health standpoint has accrued therefrom.

There is ample evidence to prove that gonorrhoea is not self-limited; that it may assume a chronic form and persist for many years, that the infective organisms may become entrenched in impregnable anatomic situations and there remain quiescent (latent) for an indefinite period; that recrudescence may occur at any time and the disease assume its original virulence; that transmission of infection has been known to happen many years after the patient had been pronounced at least clinically cured. It is true that many infectious diseases subside within a given time without treatment provided the patient possesses the requisite resisting powers; but if gonorrhoea ever subsided without treatment, or if a spontaneous cure has ever been recorded, the literature fails to reveal such information.

As remarked by the writer on numerous previous occasions, the prevention of dissemination of venereal disease concerns the physician as well as the layman, the moralist as well as the statesman, the philosopher as well as the fool. These are days of preventive medicine, this branch now being accorded greater prominence and importance than many others, and gonorrhoea is distinctly preventable. Its dissemination, however, is not altogether traceable to confirmed prostitutes. In every large city in Christendom there are hundreds of amateurs, street-walkers, clandestines, "occasionals," rooming-house-girls, etc., to whom the spread of venereal disease is largely attributable. There are doubtless many men who would not consort with professional prostitutes, who perhaps might otherwise lead exemplary lives, but who are attracted by the wiles of the amateur demi mondaine and in subsequent dalliances acquire and convey infection to the conjugal couch. The novice does not recognize the financial importance of cleanliness and neglects this feature both before and after becoming diseased, which is untrue of the majority of her professional sisters. Indeed, it has been said that the professional prostitute might teach an important lesson in cleanliness which many virtuous women strenuously and assiduously neglect. After coitus (and sometimes before) she takes a vaginal

douche of warm water, with or without the addition of an antiseptic, a procedure which is practically unknown among many presumably virtuous and law-abiding females. Sexual cleanliness is an important item in striving toward the acme of healthy sexual living, a matter which is too often overlooked or ignored in the connubial state. Doubtless many men have been at least partially justified in forsaking the conjugal couch to seek sexual satisfaction elsewhere because of slovenly, filthy, neglectful, and sexually unappreciative connubial partners. The professional prostitute recognizes that health and cleanliness are essential to her success, and after sexual congress the vaginal douche, bathing, micturition, etc., are more religiously observed than the prayers of the righteous. However, those who bask in the sunshine of the demi mondaine are still in danger, because this routine of cleanliness is not an absolute safeguard against infection provided venereal disease be present in contagious form. "He who thrusts his hands into the fire is almost certain to be burned."

Prior to discontinuance by judicial authority of licensed houses of prostitution, in cities where periodic medical inspection was enforced, the liability to infection was slightly lessened; but the dissemination of venereal disease was not materially diminished, since inspection did not include street-walkers and clandestines. So far as the writer is informed governmental control of prostitution wherever attempted has resulted in dismal failure and the recent "national spasm of virtue" appears to be no exception to the rule; it has resulted in decreasing professionals and correspondingly increasing the more dangerous clandestines; and instead of diminishing the incidence of venereal disease the converse appears to be true, the reasons for which are perfectly obvious. It is well recognized by those who have accorded the subject consideration that the danger of contracting venereal disease is less from the professional prostitute than from the novice, but the only absolute safeguard is "not to submit one's self to the source from which infection may be acquired," i. e., do not consort with members of the Cyprian sisterhood, either professional or clandestine.

While it is frankly admitted that national, state and municipal legislation is utterly impotent as a conservator of public morals, yet it seems a strange commentary that there exist stringent legal enactments for prevention of contagious and infectious diseases and rigid quarantine regulations to prevent their dissemination, yet these laws and regulations appear inapplicable to venereal diseases which may attack any organ, structure or tissue embraced within the human economy, which may devitalize the individual and imperil the integrity of society itself. That venereal diseases are prevalent in every stratum of society there is abundant evidence to prove; they are insidious and deadly maladies, infectious, inoculable, contagious, transmissible, yet they are not included in the list governed or re-

stricted by legal enactment and quarantine regulation. The leper, from time immemorial, has been isolated or ostracised; the mildly insane individual is arrested and forcibly detained where harm cannot be inflicted upon himself or others; yet those more dangerous than either the leper or the mild lunatic are allowed freedom to disseminate and perpetuate disease, pestilence and death throughout the length and breadth of the land.

The commentary appears particularly pertinent that perhaps the most prolific present operating agency in promoting sexual promiscuity and dissemination of gonorrhoea (also syphilis in lesser degree) is the multiplicity of automobiles. There exists valid authority for the statement that, despite its beneficent influence in legitimate directions, the automobile has been one of the greatest primary operative factors in the destruction of adolescent morale the history of the world has known; that it has also been largely responsible for increasing the most dangerous form of clandestine prostitution and the incidence of venereal disease has been made apparent by investigation and inquiry. Automobiles have become veritable houses of prostitution since red lights no longer shine along familiar by-ways. The damage inflicted upon youthful humanity in the production of moral obliquity through the agency of the automobile must be written in colors of decided crimson.

Only specialists in this department of medical practice realize the extent to which gonorrhea (also syphilis) has permeated the social fabric; the prominence of the individual in the community, the church, in society, bears no more relationship to the incidence of venereal disease than "the flowers that bloom in the spring." Gonorrhea is no respecter of persons and like virtue and vice is oftentimes discovered in the most unexpected places:

It attacks alike the rich and the poor;
And the prominent as well as the obscure.

No age, sex or race can be considered specifically diseases, which are now being discussed without exempt from its pernicious influence. And the attempts to prevent its dissemination by governmental, state and municipal authority to the contrary notwithstanding, the disease will probably prevail in greater or lesser degree in every community until the supervision of radical, fundamental changes in human nature which shall render sexual promiscuity a negligible quantity.

NOTHING LEFT

Alice—"I hear Jack has broken off his engagement with Gladys. How did she take it?"

Virginia—"Oh, it completely unmanned her."

—*American Legion Weekly.*

THE LUCK OF SOME MEN

Frank—"I don't think my wife could tell a lie in twelve months."

Guile—"You're fortunate. My wife can tell a lie the instant I utter it."—*Sydney Bulletin.*

LOCAL ANESTHESIA

Report of the Committee of the American Medical Association Appointed to Investigate the Toxic Effects of Local Anesthetics; Stomatological Section.

Henry Sage Dunning. Dental Items of Interest. April, 1926, p. 264.

The Committee has shown that procain (Novocain) is the safest anesthetic if employed properly. Large doses of epinephrine are considered to be unsafe in conjunction with a local anesthetic. The use of stock solutions was deemed inadvisable. Measured quantities of a known strength solution should be prepared at the time of injection, or sterile solutions in ampules employed.

Regional Anesthesia in Major Surgery. Payton R. Denman. American Journal of Surgery. April, 1926, p. 34.

A quantitative comparison of the toxicity of the alkamine esters of aromatic acids used as local anesthetics with the details of the intravenous method, using rabbits, was developed and adopted for the determination of the toxicity of Novocain. The minimal lethal dose of Novocain by this method is 50 milligrams per kilo body weight, which represents a dose of 3.75 grams (58 grains) Novocain powder for a man weighing 75 kilos (165 pounds) when injected intravenously as a 2 per cent solution.

For infiltration anesthesia in man Novocain may be freely injected if slowly done, in properly prepared solutions of 0.5 per cent to 1.0 per cent strength in almost unlimited quantities, provided care is taken not to inject the solution intravenously. Babcock has repeatedly used 500 cc of a 1 per cent Novocain solution in a single operation. Farr has employed 45 grains (3 gm.) in 0.5 per cent solutions without untoward symptoms, and Meeker employed 500 cc in 0.5 solution without toxic manifestations.

The author has done practically all of his operations under regional anesthesia and in many cases has used as much as fifty grains of Novocain without the slightest toxic symptoms. He feels that Novocain solution can be used in sufficient quantity to do any major operation, with perfect safety.

The patients are rational at all times. Shock is almost unheard of, even in the most grave procedures. Nausea, vomiting and gas pains are practically nil. The patients can take nourishment the same day of operation. The bowel and kidney functions are undisturbed. A sufficient number of cases have already been reported to give regional anesthesia a high place in the realm of anesthetic methods, and it is suggested that anesthetists and young surgeons of today lose no time in thoroughly acquainting themselves with its technic, scope and utility.

Sciatica Treated by Epidural Injection of Novocain. W. B. Marbury. Virginia Medical Monthly. Sept., 1925.

The author's technic is simple, requiring no previous preparation of the patient, and may be utilized in the home, hospital or office. The solution is prepared by sterilizing 0.25 Gms. Novocain in a small quantity of physiologic saline and then adding enough of the latter

to make 50 cc. The solution is injected slowly. If one injection does not relieve the pain, repeat in two days. His conclusions are as follows: (1) The pathology of sciatica is not definite. (2) About 65 per cent of the cases treated by the injection of Novocain solution are either cured or greatly improved. (3) The best results have been seen in the cases which had the most pain. (4) The injection is simple and without danger, if properly done.

Sacral Anesthesia. Edward J. Ottenheimer. Boston Medical and Surgical Journal. Dec. 10, 1925, p. 1094.

While it seems fairly certain that 30 to 50 cc of a 1 per cent solution of Novocain are sufficient to produce adequate anesthesia for many of the genito-urinary and rectal operative procedures this amount does not allow for the more extensive operations which can be done safely under sacral anesthesia. In this series the best, and most consistently successful anesthesia, was obtained with 90 to 100 cc of a 1 per cent Novocain solution and there were no untoward effects observed from this amount. The author is inclined to infer that large quantities of a weak solution are superior to smaller quantities of a more concentrated solution, particularly if a high anesthesia is indicated. If the resistance becomes very great after 40 to 50 cc have been introduced it is injudicious to continue to introduce the solution under extreme pressure.

Nitrous Oxid and Local Anesthesia in Abdominal Surgery. P. K. Gilman. American Journal of Surgery. Jan., 1926.

The advantages of combined anesthesia are striking. Manipulations are gentle; hence shock is largely eliminated. It is not rare for the patient to leave the table with an unchanged blood pressure. The patient is conscious by the time the postoperative toilet is complete. The often distressing and prolonged recoveries of consciousness from ether are eliminated. Postoperative nausea and vomiting are practically absent, except at times for an immediate small emesis. Bowel paresis and accompanying distension and gas pains are markedly reduced in their frequency of occurrence. Combined anesthesia patients take fluids earlier, may be nourished sooner than the ordinary ether patient, convalesce more rapidly and suffer less general post-operative distress.

Anesthesia and the Blood Urea. Abadie, Baldous and Dornier. Presse Medicale. March 27, 1926, 34:387.

The blood of twenty-six persons operated under intraspinal anesthesia was examined. The urea content appeared increased for about a week. It may be due partly to the surgical trauma, since different toxalbumins and nucleins are released from the injured tissues. This explains why azotemia is often more pronounced after major than after minor operations. Affections of the liver and kidneys, as well as old age, may also be responsible for the high blood urea after an operation. The degree of the azotemia depends to a certain extent on the anesthetic used. It was considerably higher with stovaine than with procaine. It is probable that the drugs act first on the sympathetic system, while the kidneys are involved secondarily.

This does not interfere with the advantages of the intraspinal method, if the choice of anesthetics is made carefully.

Suprapubic Prostatectomy. G. Cattaneo. Archivio Italiano di Urologia. March, 1926, 2:293.

In the author's service, the mortality of over a thousand Freyer operations has dropped from 14.38 per cent in 1909 to 1 per cent in the last hundred cases. He tabulates the details in this last group to show the outcome according to the indications and technic, warning that prostatectomy must not be done as an emergency operation. He prefers the two-stage technic. Calcium chloride arrested postoperative hemorrhage in 50 per cent of his cases, rendering tamponing unnecessary. Local anesthesia for the epicystotomy and epidural for the prostatectomy, refraining entirely from general anesthesia, have contributed to the favorable outcome.

Correspondence

EVERY PHYSICIAN IN ILLINOIS HAS A
DUTY TO PERFORM. VACATION
PERIOD IS THE TIME TO DO IT.

Silvis, Ill., July 23, 1926.

TO THE EDITOR: Now, this year, while there is no legislature in session, we should see to it that every prospective legislator and the public so far as it is possible to do so, comes to understand (at home or on the street) one thing, which is a fundamental point, namely: That a "school of healing" is one thing and that it makes claims for "special methods of cure"; while a health expert is another thing, claiming nothing but that he has information on and access to the health history of the world for some twenty-three hundred years, and that he stands ready to use every worthy thing in that history so far as he is able.

It is fundamental that the "medical profession" is not a "school of healing" and IS a group of "health experts." It is *not* one of the schools of healing referred to in law. All of the faulty decisions I have read have assumed that it was one of the "schools of healing" and have been led to faulty conclusion by that erroneous assumption.

CORRECT PRONUNCIATION

"James, have you whispered today without permission?"

"Only wunst."

"Leroy, should James have said 'wunst'?"

"No'm, he should have said 'twist'."

—Carnation.

Original Articles

THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM*

PETER BASSOE, M. D.

CHICAGO

The aim of this paper is to point out the possibilities and limitations of treatment in neurosyphilis, to what extent treatment influences the prognosis and, above all, to emphasize that an ounce of prevention is worth many pounds of cure. We must first of all be clear as to what our problems are.

Primary syphilis, the chancre, never attacks the nervous system. During the secondary stage, even very early, before the rash has appeared and while the chancre is still present the spinal fluid may show increase in proteins and cells. In 221 such cases, with only the chancre present, Wile and Hasley¹ found globulin increase in twenty-five and cell increase in twelve, though the Wassermann test was positive in only eight. Cornaz² found increased cell count in 35 per cent of cases of syphilis before the appearance of skin and mucous membrane lesions, and Nicolau,³ in eighteen of fifty-one such cases. Eleven of these eighteen patients showed pupillary inequality. Nicolau points out that this early lymphocytosis is resistant to a treatment sufficiently vigorous to suppress all secondary manifestations and to keep the Wassermann reaction negative. This is a very important point, showing that a physician may fool himself in thinking he has "aborted" syphilis by early treatment when neither secondaries nor positive Wassermann reactions appear. Later in the secondary stage spinal fluid changes—still in the absence of neurologic symptoms—become more frequent. It has been suggested that the persons showing these early spinal fluid changes are the ones who later develop paresis and tabes. Fordyce⁴ in particular has advocated this view. It is probably not correct, however, for those who, like Wile of Ann Arbor, as a routine examine the spinal fluid in early syphilis find that it shows signs of inflammatory reaction so frequently that it is more reasonable to conclude with Nonne⁵ that this reaction is part of the general roseola and is protective and favorable. Nonne knows of many paretics who had had normal spinal fluid until the onset of mental

symptoms, while careful scrutiny of a large number of cases with early syphilitic meningitis failed to show that any of them subsequently developed paresis. Supporting himself by observations on man by E. Hoffman, and on rabbits by Plaut and Mulzer, he claims that apparently normal spinal fluid, without even a positive globulin reaction, may also be infectious.

However, the emphasis laid on the early spinal fluid changes is fully warranted, for it is safe to say that the meningeal surface is the starting place of practically all neurosyphilis. After the syphilitic meningitis has been established, extension into the brain and cord may follow, and blood vessels, small and large, are peculiarly susceptible. They often become wholly or partly occluded, with resulting anemia or even necrosis of the brain or cord tissue supplied. If it happens to be a middle cerebral artery we may get hemiplegia, with or without aphasia; if a posterior cerebral, hemianopsia; if a basilar artery, pons and bulb symptoms; if spinal vessels, total paraplegia or partial paralysis of spinal type. Cranial and spinal nerve roots are nearly always more or less caught in the meningeal inflammation; hence, the frequency of ocular palsies, pupillary changes, optic neuritis or atrophy, root pains and anesthetics around the trunk or in the limbs, etc.

We shall not go into details of the multitudinous clinical pictures met with in the meningeal and vascular types, but merely point out that practically all so-called meningo-vascular syphilis, or what used to be called "tertiary cerebrospinal syphilis," consists of:

1. Syphilitic meningitis.
2. Syphilitic arteritis.
3. Gummas, usually meningeal.

Often there is a combination of these three, but one or another will predominate in any given case. Usually, all of these may be detected before the parenchyma has become seriously damaged and they respond well to our various anti-syphilitic remedies.

"*Parenchymatous*" *Neurosyphilis*—the old "parasyphilis." Here belong general paresis, tabes, optic atrophy, and more rarely auditory nerve atrophy and degenerations in the motor system of the type of amyotrophic lateral sclerosis. Neither the term "parenchymatous" nor "parasyphilitic" is a good one. Interstitial changes are also present, especially in the

*Read in abstract before the Illinois State Medical Society, May 19, 1926.

meninges and vessel walls, and these disorders are not a "para" stage, but real syphilis, as has been shown by the finding of spirochetes in the tissues. However, Jahnel⁶ and others have shown that these organisms are chiefly found in the gray matter and that they are not especially likely to be found in the areas showing the most intense inflammation. Spielmeyer⁷ warns against drawing conclusions from the clinical condition regarding the intensity and localization of tissue changes, and he has called attention to the existence of truly parenchymatous degenerative changes that are independent of the inflammatory and vascular ones. In this way general paresis differs from other forms of neurosyphilis.

Why do some individuals develop paresis and tabes, and why do these affections come on late, usually years after all signs of syphilis have disappeared? Why do they not occur in the early stages when the brain and cord, along with the rest of the body, are flooded with spirochetes? Neglect of early treatment is hardly the chief cause, for such a good observer as Nonne⁸ thinks that during the arsphenamin era there has been rather more neurosyphilis, and K. Wilmanns⁹ has pointed out that in certain primitive peoples tabes and paresis have recently become prevalent. There has always been much syphilis among them, so the change can only be attributed to the recent introduction of antisyphilitic treatment, probably of an insufficient degree. Two clinical facts of importance stand out; first, that it is extremely common for patients with tabes and paresis to have had no skin lesions at all, or only very trivial ones and, second, it is nevertheless usually impossible to effect superinfection of the skin in such patients. This has led to the hypothesis—for it is nothing more—that the skin is the source of immune bodies, and in their absence spirochetes may multiply indefinitely and invade the viscera without resistance. If this is true, early treatment should be either drastic enough to destroy all spirochetes, or so mild that the secondary roseola is not suppressed, so the desirable antibodies may form. Hauptmann¹⁰ assumes that certain chemical constituents of the spirochetes act as foreign proteins which promote proteolytic ferment action in the host, with the formation of poisonous substances injurious to the endothelium of blood vessels and to nervous tissues. This view is helpful in explaining the independent brain degenera-

tions emphasized by Spielmeyer, and the distribution of spirochetes in the brain to which reference has been made. That in paresis, toxic substances as well as spirochetes play a part is indicated by the recent and, to my mind, very important experimental work reported from Vienna by H. Hoff and E. Pollack¹¹. They injected the spinal fluid of paretics under the cerebral dura in rabbits and after four or five weeks fluid changes like those in human paresis were observed, including the paretic Lange curve. Both degenerative and inflammatory changes were observed in the brain. With fluid from cases of tabes and other forms of neurosyphilis different changes were observed.

The main point about these so-called "para-syphilitic" disorders is that they tend to be stubbornly progressive and are so rebellious to even the most intensive treatment that, for the present at least, much more good can be achieved by prophylactic measures; by which I mean, first, measures to limit the spread of syphilis and, second, really adequate treatment in the early stages to minimize the danger of living spirochetes remaining in the central nervous system and its coverings.

Prognosis of Neurosyphilis.—A reasonably correct prognosis in a given case can be made only by a physician capable of visualizing the underlying lesions and of determining whether or not there is a likelihood of destruction of any cell groups or fiber bundles of the central nervous system. New cells and fibres are not formed in the brain, cord, or optic and auditory nerves, so any destruction of these parts is permanent and irreparable. What is dead remains dead, regardless of the fact that the agency causing the death might have been successfully combated at an earlier time. In the case of syphilis of the nervous system this will always remain true, no matter what progress in syphilotherapy the next hundred or thousand years may have in store. The biologic fact of the practical absence of regeneration in the central nervous system will stand. It puts an absolute limit on the possibilities of treatment of paresis and tabes which will always make prophylaxis much more effective than curative treatment.

Let us see what treatment of the very best kind may accomplish—assuming that some day we shall possess a substance capable of killing all spirochetes and of removing all gummatous

tissue, syphilitic granulation tissue, and cellular infiltration, all of which our best present remedies will do at times. If in a case of tabes, spinal-cord or optic nerve fibers have degenerated, those fibers will not regenerate, nor will the destroyed cortical cells and association fibers in a case of paresis. Such symptoms as dementia, ataxia, anesthesia, and impaired vision will be relieved only to such extent as they depend upon lesions which not yet have become degenerative. On the other hand, in tabes, symptoms like shooting pains, explained by root irritation from syphilitic meningitis, or the excitement and convulsions of paresis caused by cell infiltrations and other inflammatory changes, may be relieved. In cases of ordinary cerebrospinal syphilis the same holds true; if part of the brain or cord has been destroyed by softening from occlusion of a syphilitic artery, that part is just as dead as if it had been the seat of an abscess or had been torn out by a shell fragment. Here, however, we deal much more with lesions in the connective tissues, irritating, compressing, or causing undernourishment of the parenchyma, and the latter may be fully restored if treatment is instituted in time.

Treatment of Established Neurosyphilis.—It is a little difficult to warm up to this subject if we contemplate how little neurosyphilis there would be to treat if more energy were spent on prevention. However, the paretics and tabetics remain with us, and as intellectual and endurance tests for the neurologist nothing is more interesting and exacting than the problems concerning their treatment. The subject is enormous and I can treat it only in a very sketchy manner, confining the discussion largely to paresis and tabes. Theoretically, either of these can be cured only at an early stage, but may be arrested at any stage. Practically, cure and arrest are seldom achieved, but remissions for long periods of nearly all symptoms and permanent relief of some symptoms are within our reach with present methods. Arsphenamins intravenously, with mercury in some form or other, accomplish all that can be attained in some patients. In spite of all theoretical objections to intraspinal treatment, whether by the Swift-Ellis technic or by direct injection of neo-arsphenamin, my own experience has taught me that some paretic and tabetic patients can be

further improved by it after intravenous treatment fails to improve them further. However, its use is not free from mishaps. Even severe meningeal reactions and transverse cord lesions may be produced, and it is time-consuming and more or less painful. Two recent methods deserve special mention; namely, intravenous injections of tryparsamide and inoculations with malaria and relapsing fever.

Tryparsamide was made by Jacobs and Heidelberg in 1915 and its action studied carefully for several years before the first reports on its action in neurosyphilis appeared in 1923¹². It is pentavalent and crystalloid while arsphenamin is trivalent and colloid. The arsenic content of this substance is about 25 per cent, but its toxicity is remarkably low and its tissue penetrability high, particularly of the nervous system. It is said to be of little value in early syphilis and to have very slight spirocheticidal action. Its value seems to lie in a power to stimulate the normal defensive mechanism of the body and it also improves the general bodily condition and tends to cause an increase in weight. It is very soluble, non-irritating, and does not cause nausea or other unpleasant symptoms on injection. The one drawback is the occasional production of dimness of vision which, however, at least in patients without previous optic nerve disease, is only transient. It shares this tendency to affect the optic nerve with another pentavalent arsenical preparation, atoxyl, with which it is closely related. However, it looks as if our experience with arsphenamin in regard to the optic nerves is to be repeated in part. At first we were warned not to use arsphenamin when there was optic nerve disease, but after a few years we began to use it in the treatment of that very condition. Already Schwab and Cady¹³ have reported improvement in vision in cases of optic atrophy treated with tryparsamide, and I am now treating two patients, one of whom at the outset had slight optic neuritis, the other slight atrophy. Both have received several series of tryparsamide treatment and been regularly examined by an ophthalmologist. Both show improvement in visual acuity, visual fields and fundus appearance. It is, therefore, proper to use this drug even in cases with optic nerve affection when the arsphenamins and other remedies have failed, and when the seriousness of the main symptoms,

especially in the case of general paresis, justifies incurring some risk.

Walter I. Lillie¹⁴, ophthalmologist of the Mayo Clinic, has brought out the pertinent point that neither tryparsamide nor other arsenicals have been reported to produce a true toxic retrobulbar neuritis with rapid loss of central vision due to central scotoma. The changes reported have been reduction of visual acuity with peripheral narrowing of the fields—changes which also commonly occur in untreated neurosyphilis, and he inclines to blame an activation of a latent syphilitic process rather than a direct toxic action of the drug. However, for the time being, it is safer to be guided by J. E. Moore's view, that the experience with the closely related atoxyl has shown that an arsenical drug may cause blindness by its toxic action and without producing central scotoma. Granting this exception, it is encouraging to users of tryparsamide that Lillie, after studying 114 cases, concludes that "ocular changes occur as often with arsphenamin treatment as with tryparsamide treatment, and the use of tryparsamide is not contraindicated by pathologic changes in the fundus." The standard technic of tryparsamide treatment is the giving of eight weekly doses of three grams, with one intramuscular injection of one grain of salicylate in the intervals. After such an eight weeks course the patient is given a month's rest, and the laboratory tests are repeated before the next course is given.

As to results, a sufficient number of observations is recorded to allow the conclusion that at least in general paresis more is accomplished than with any intravenous or intraspinal arsphenamin method, and the method is much more simple and pleasant both for patient and physician. Thus, in the second report from the Wisconsin workers¹⁵ in eighty-four cases of paresis of ambulatory type the mental symptoms cleared up in thirty-seven and were improved in thirty-eight others. The blood Wassermann reaction became negative in forty-nine cases, or 54 per cent. In six cases the spinal fluid became normal, and in thirty-six, markedly improved. Of twenty-nine cases of tabes, ten were greatly improved, sixteen unimproved. J. E. Moore, H. M. Robinson and A. Keidel¹⁶ obtained results almost as good, but emphasize that this drug should not be used in early syphilis; and in

tertiary and latent syphilis they consider it inferior to the arsphenamins.

H. C. Solomon and H. R. Viets¹⁷ give a report of 100 cases treated in Boston, and while they were favorably inclined, they were not convinced that improvement in general paresis had been more satisfactory than with the older methods of intensive treatment by intraspinal, cisternal and ventricular injections. In a later report¹⁸ they are more enthusiastic, as they have found that in many cases which did not respond at first good results, both serological and clinical, were obtained after seventy-five or more injections had been given. Schwab and Cady¹⁹ noted clinical improvement in 85 per cent and serologic improvement in 90 per cent of all cases treated. However, they alternated tryparsamide with arsphenamin and mercury. John H. Stokes and Lewis F. X. Wilhelm²⁰ treated 152 cases in the Mayo Clinic and state that tryparsamide is superior, both clinically and serologically for the treatment of the resistant cases of neurosyphilis. In some paretics they met with a definite Herxheimer-like flare-up of the mental symptoms, and their experience with advanced institutional cases was unfavorable. This is corroborated by the work of Read and Paskind²¹ in Illinois institutions.

One of the most recent reports comes from Ann Arbor, Michigan, and is made by Udo J. Wile and L. M. Wieder²². They state that continued observation has convinced them of the value of tryparsamide in producing clinical betterment in almost 30 per cent of a carefully selected group of cases, but in the main clinical improvement was not paralleled by striking changes in the spinal fluid.

Before mentioning my personal experience I wish to pay tribute to the Rockefeller Institute, whose generosity made possible, first, the discovery of this drug, and then its careful experimental use by selected investigators all over the country, so that when it was released for general use early last year there was already available an array of most helpful data. My own experience of three years deals with patients outside of institutions, principally paretics. The only peculiarity in my small group has been a relatively greater serologic than clinical improvement.

One case, reported elsewhere in detail by G. B. Hassin and myself, *Arch. Neurol. & Psych.* July, 1926 (16:37) is instructive but dis-

couraging. After a period of mental and physical improvement, and while the spinal fluid was normal, the patient declined rapidly and succumbed promptly to an attack of broncho-pneumonia. There was intense inflammation in the cerebral cortex, with extensive proliferation of capillaries, degeneration and destruction of ganglion cells and nerve fibers, and abundant spirochetes in the frontal and temporal lobes. Another patient, also a paretic, showed no mental improvement but gradually his serology became negative. However, when this had been accomplished he grew acutely disturbed mentally, and his previous mildly grandiose delusions gave place to depressive ones which led to suicidal attempts, and he had to be committed to a state hospital. There he further declined both mentally and physically, but the serology remained negative. It is fair to state that tryparsamide treatment is superior to all kinds of intravenous and intraspinal arsphenamin treatment, that it prolongs the life of many patients and produces more or less prolonged remissions, but probably only very rarely, complete arrest of the disease.

Malarial Inoculation.—It is an old observation that patients with general paresis, epilepsy, dementia praecox, and other psychoses may have a more or less prolonged remission from their mental disorder after an acute febrile disease. This has led to the use of many fever-producing agents in treatment and to the discussion as to whether it is the fever *per se*, the leukocytosis or some other factor that brings about the remission. Turpentine abscesses, nucleins and tuberculin were used with varying success for many years, but during the past seven years inoculation with malaria and relapsing fever has entirely over-shadowed the other agents mentioned. Inoculation with tertian malaria was reported upon by Wagner von Jauregg in 1918.* Since then this work has been continued in Vienna, was soon taken up in Hamburg, and during the last two or three years reports have come from all over the world. The usual technic is to inject, subcutaneously, 0.5 to 4. c. c. of malarial blood. If the blood is to be transported or preserved for some time, it is usually defibrinated with a 50 per cent dextrose solution. It is important to have a pure strain of tertian malaria, for if estivo-autumnal organisms also are present death

may result. It seems to be immaterial whether the blood is taken during a paroxysm of fever or in the interval. There is no immediate reaction and the period of incubation varies from ten to twenty-five days after the subcutaneous injection, and five to eight days after intravenous injection. The patient is then allowed to have from eight to twelve paroxysms before quinin is given. From all reports now available it is evident that a very large number of patients have a complete remission and are able to return to their former occupations. Thus, Gerstmann reported from Vienna that in September, 1921, three out of nine patients treated in 1917, and nine of twenty-five treated between September, 1919, and May, 1920, were still perfectly well and at work. Of fifty-one patients treated in Hamburg between June, 1919, and October, 1920, when all were re-examined in March, 1922, fourteen had complete remission and sixteen others did their former work but showed slight mental defect. After subsequent relapse, remissions have again occurred after a second inoculation. In 1923 Gerstmann reported detailed observations in 294 cases. There had been complete remission in 112, incomplete in ninety others, and ninety-two patients has been uninfluenced. Three patients have died of intercurrent disease during remissions and histologic examination revealed distinct regression of the cortical changes. Favorable results have since been reported from England, Denmark, Sweden, South America, and in 1924 the first report of such treatment in America was made from St. Elizabeth's Hospital in Washington, D. C., by Nolan D. C. Lewis²³ and others. Of sixty-eight patients inoculated, nine failed to develop malaria. Complete remission, mental, physical and serological, was observed in 31 per cent of the cases. The brains of four extremely deteriorated patients who died after the treatment, showed apparent reduction in the inflammatory changes. In two of the brains no spirochetes were found, and in the others only very few. At the New York Psychiatric Institute decided improvement was observed in eighteen of thirty-nine patients treated, according to H. A. Bunker, Jr., and G. H. Kirby²⁴. In a series of 1,000 untreated cases of paresis in New York institutions the percentage of spontaneous remissions was 3.5. Tophoff²⁵ analyzed a group of 289 paretics in an asylum near Bremen and found that there had been 4.8 per cent com-

*Early in the summer of 1926, however, this man without further treatment became normal mentally and returned home.

plete remissions and 14.9 per cent incomplete. In order to evaluate the treatment properly it is, of course, important to be aware of this tendency to spontaneous remissions. Almost as interesting as the results themselves is the speculation as to the cause. Some authors attribute it to the elevation of temperature and quote experiments showing that spirochetes in the chancres of rabbits may be killed when the temperature of the animals is raised to 42° or 43° C.

However, the clinical results bear no distinct relationship to the degree of fever induced and higher temperatures may be produced by injection of milk or typhoid vaccine and yet the results are not as good. Leukocytosis is usually absent in malaria. Malaria *per se* does not prevent the development of paresis, as a history of malaria during the early stages of syphilis frequently has been obtained. Kirschbaum believes that the benefit obtained is analogous to that produced by parenteral introduction of proteins in many skin affections. Weichardt designated the process induced, "protoplasm activation" which is something similar to the claim made for the action of tryparsamide in strengthening the protective forces of the human body. F. E. Müller²⁶ has further studied this protein action and has demonstrated the existence of hyperemia, transudation and increase in leukocytes in the diseased tissues, without general leukocytosis. These phenomena, as well as the diminution of leukocytes in the peripheral blood at the onset of a chill, are attributed to parasympathetic action.

Inoculation with relapsing fever was already practiced in cases of ordinary dementias by Rosenblum of Odessa back in 1874. In 1919, Plant and Steiner began to employ relapsing fever inoculation in paretic dementia. They prefer relapsing fever to malaria because they assume a close biologic relationship between the spirochete of relapsing fever and that of syphilis. Higher fever is produced and if the paroxysms do not cease of themselves they may be stopped by neo-arsphenamin.

Effect of Inoculation Treatment.—In spite of the large number of reports of patients having returned to their former occupation and remaining apparently well up to the present, there is already abundant pathological proof that only remission, not cure, is attained.

In the laboratory of Wagner von Jauregg's

Clinic in Vienna, E. Sträussler and G. Koskinas²⁷ had the opportunity to examine the brains of not less than thirty-five paretics who had been inoculated with malaria and thirty-one of these patients had experienced more than five paroxysms. The authors set themselves the task of determining whether, in cases with marked clinical remission, there also would be found a corresponding change in the pathologic process. Long ago Alzheimer, in his important work on general paresis, had related the case of a patient with a complete remission who died of heart disease, but in whose brain a very pronounced and typical paretic disease was found. The present authors, however, found regression and even arrest of the pathologic process proportionate to the clinical remission. A striking case was that of a man with the simple dementing form of paresis who had received malarial treatment in August, 1921, followed by a very decided but not complete remission. He was able to work until February, 1924, when he suddenly developed ileus and died after laparotomy. There was some fibrous thickening of the meninges, and cell infiltrations in the pia and about the cortical vessels were very slight and consisted of lymphocytes, while plasma cells were exceedingly scarce. The changes in the ganglion cells, nerve fibers and glia were so slight that without knowledge of the clinical history a diagnosis of general paresis could not have been made. Not less than half of the cases having more than five malarial paroxysms showed regression in the pathological process. The authors attempt to answer the question as to how the improvement after malarial inoculation is brought about. In four cases in which death occurred soon after the paroxysms of malaria, there was a decided intensification of the infiltrative process, and in two cases there was formation of structures resembling miliary gummata, indicating a favorable effect on the protective forces of the organism. This idea of an initial increase in inflammatory reaction, with a change to a more benign inflammatory type corresponds with the clinical observations of transient states of excitement, confusion, and hallucinosis, temporary increase in cell count in the spinal fluid and a change in the colloidal reaction from a paretic to a simple syphilitic type.

R. Markuszewicz²⁸ reports the case of a man aged 57 suffering from general paresis, who,

after inoculation with malaria displayed two peculiar reactions; namely, a change in the mental picture from simple deterioration to a hallucinatory-paranoid state, and the development of gummata in the skin. The latter appeared two months after the inoculation and was preceded by furunculosis. The occurrence of tertiary manifestations like these gummata in a case of general paresis is exceedingly rare, but in this case the diagnosis of gumma cannot be questioned, as the lesions were excised and examined microscopically. The change in the mental picture recorded here is not uncommon and has been extensively discussed by Gerstmann and Pötzl, who consider it a favorable sign and an indication that the disease in the brain is changing into a more benign form. The mental change in the present case was attended with a change in the spinal fluid reactions from a paretic to a simple syphilitic type. On the basis of the reactions in this case the author indulges in some interesting speculations. He assumes that through the furunculosis allergy of the skin was induced and sensitization of the skin was at first non-specific, but on account of the increased immune body formation, mobilized by the malarial injection, the non-specific reaction became changed into a specific one, and the neurotropic syphilitic virus in this patient was lowered in virulence to become dermatotropic once more, and to produce the cutaneous gummata. The author here sees an important therapeutic hint. Perhaps the way to treat syphilis successfully and prevent late neurosyphilis is to increase the allergy of the skin by inducing suppuration or by inoculating the skin with a trichophyton, and then inoculate malaria and give specific remedies. The author quotes Kyrle²⁹ as having made favorable reports on the use of malaria in early syphilis, and F. Bering³⁰ as having stated that the earlier the malaria treatment was instituted in syphilis of the central nervous system, the better the results. However, the present author emphasizes the necessity of postponing the use of the arsphenamins until the skin immunity has reached its height.

The Treatment of Tabes.—As set forth in the remarks on prognosis, this has its limitations on account of the non-existence of regeneration. Sometimes the process is arrested, or at least retarded, by intravenous and intraspinal arsphen-

min treatment and by tryparsamide, as well as by mercury and perhaps bismuth, the latter acting very much like mercury. Certain special local irritative symptoms may require special treatment. In the case of gastric crises I can corroborate H. J. McBride and E. A. Carmichael³¹ as to the benefit of intravenous injections of 30 c. c. of 30 per cent sodium chlorid solution. The surgical treatment by root resection is discussed in an interesting manner in a recent paper by M. Critchley and J. M. Wolfsohn³². While section of the posterior roots has often failed, relief has sometimes been obtained when the anterior roots also were severed. Section of the anterolateral tracts, chordotomy, has also been successful, while in some cases the vagus nerves seem to be at fault. It still seems that these crises may be produced by irritation of different nerve paths, and it is difficult to fix the proper mode of attack in any given case.

Prophylaxis.—From what has been said it is clear that there are only two certain ways of escaping invalidism and death from neurosyphilis; namely, not to contract syphilis, or to be treated early, intensively, and with the control of spinal fluid examination, even in the absence of secondaries and of nervous symptoms. Syphilis is a disease which probably could be eradicated from the earth within the period of three or four generations if all people really wished it. We have only to control and restrict the freedom of action of human beings known to be capable of transmitting the disease. We are not concerned with air or water pollution, nor with milk, oysters, rats, ground squirrels, insects, cattle or hogs. If we should segregate the active syphilitics, like "Typhoid Marys" or lepers, there would certainly be very little syphilis contracted by people possessing sense enough to protect themselves against infection, and the others would deserve segregation for their own sake as well as for the benefit of the race.* We of the medical profession should at least do our utmost to teach the public to avoid contracting syphilis, and to establish, or aid in establishing, means for the adequate treatment of all infected persons, regardless of their financial and social positions. We must either, among ourselves, organize the necessary cheap clinics all over the country, or we must say that we cannot do it alone and urge municipalities and states to do it, or acquiesce

in and encourage the establishment of such clinics by non-medical philanthropists.

1. Jour. A. M. A., Jan. 1, 1921.
2. Cor. Bl. f. Schweitz. Aerzte 48:1584. 1918.
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*According to M. Ikhtemann (Ann. mal. vénér., 1925, 20: 561) Rosenblum had inoculated paretic patients with malaria, typhoid and relapsing fever between the years 1864 and 1874 and made a report in the Odessa Hospital Bulletin, Feb. 13, 1876.

23. Am. Jour. Psychiatry, Oct., 1924.
24. Jour. A. M. A., Feb. 21, 1925.
25. Zeitschr. d. l. ges. Neurol. u. Psych., Vol. 9, 1924.
26. Muench. Med. Woch., 1922, No. 43.
27. Zeitschr. f. d. ges. Neurol. u. Psych., Vol. 97, 1925.
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*The idea of compulsory treatment of syphilis is not new. In 1773 compulsory and free treatment was instituted in Denmark by a royal decree, which stated that it has been reported to His Majesty that venereal diseases were spreading among the peasantry, and that on account of ignorance, shyness, poverty, or mistreatment by quacks, they failed to receive proper care. Patients who had failed to present themselves for treatment were to be imprisoned after they had been cured. In 1859 a law was passed in Denmark providing punishment for those who transmitted venereal disease.

30 North Michigan Avenue.

MINUTES OF SECRETARIES CONFERENCE

Champaign-Urbana, May 18, 1926

This section was called to order at 9:30 a. m. by Dr. Harold Swanberg, president, of Quincy.

Dr. Harold M. Camp, Monmouth, read a paper on "The 100 Per Cent Efficient County Medical Society Secretary." Discussed by Dr. J. S. Templeton, Pinckneyville; Dr. W. F. Grinstead, Cairo; Dr. J. W. Hamilton, Mt. Vernon; Dr. E. R. Miner, Macomb; Dr. Harold Swanberg, Quincy; Dr. W. J. Benner, Anna; Dr. Wm. D. Chapman, Silvis. Discussion closed by Dr. Camp.

Dr. J. R. Neal, Springfield, delivered an address on "Political Attitude of Physicians." Discussed by Dr. E. W. Fiegenbaum, Edwardsville; Dr. C. J. Whalen, Chicago.

Dr. H. V. McClanahan, Galesburg, read a paper on "Observations from the Standpoint of a new Secretary." Discussed by Dr. T. D. Doan, Carlinville. Discussion closed by Dr. H. V. McClanahan.

Remarks by Dr. Mather Pfeiffenberger, Alton, President-Elect Illinois State Medical Society.

Remarks by Dr. J. C. Krafft, President Illinois State Medical Society, Chicago. Discussion by Dr. Edward Ochsner, Chicago.

Remarks by Dr. J. N. Jackson, Kansas City, President-Elect of the American Medical Association.

Election of officers: Dr. E. R. Miner, president, Macomb; Dr. J. W. Hamilton, vice-president, Mt. Vernon; Dr. W. J. Benner, secretary, Anna.

Adjourned at 12:00 o'clock, noon.

THE 100 PER CENT EFFICIENT COUNTY MEDICAL SOCIETY SECRETARY*

HAROLD M. CAMP, M. D.

Secretary, Illinois State Medical Society

MONMOUTH

County medical society secretaries might well be classified similar to risks for life insurance according to the plan known by insurance men as the "Numerical Rating of Risks." According to this plan the ideal risk is given a rating of 100 per cent. All features in connection with the risk which would lower his rating are placed in one column and those decidedly to his advantage are placed in another. By consulting these lists, he is given a definite percentage rating.

We will first consider the ideal county secretary and leave it to your own judgment to give yourself the proper rating. The position of county medical society secretary in many ways is not an enviable one, yet on the other hand, the future of the society depends largely on the caliber of the man or woman placed in that office.

As we all know, the management of a county society falls into the hands of one member, its secretary, and his is a grave responsibility. The success or failure of the Society is principally dependent on the services the secretary renders, so his, indeed, is a grave responsibility. The secretary must be energetic, visionary, good natured, constructive and broad minded. He must realize and constantly bring to the attention of the society the well known fact that the real basic unit of medical organization is the county medical society. He must be a salesman—sell—

*Read before the Secretaries' Conference, Illinois State Medical Society, Champaign, May 18, 1926.

ing the society to prospective as well as potential members.

His duties are many, he always received the kicks, but unfortunately, rarely the boosts to which he is entitled when the management of the Society affairs at his hands is ideal.

He should not only endeavor to retain his membership from year to year, but should make every effort to increase it until every eligible and reputable practitioner in his county is a member.

He should realize that his responsibilities are not only to the local society, but also to the State Society and the parent organization, the American Medical Association.

He should also remember that a chain is only as strong as its weakest link and should try to make his link in the chain of medical organization one of the strongest in the entire chain.

The ideal secretary is continually trying to improve the character and attractiveness of the meetings. Even in small counties, the meetings should be held frequently. Many counties have quarterly, or perhaps only semi-annual meetings at which time the program is made up of men of prominence in the profession and at which time efforts are made to get physicians from all surrounding counties to attend. In addition to this type of meeting, it is advisable, in my opinion, to have monthly meetings and have local men on the program. With such an arrangement, every member present will get up to discuss papers on timely subjects, when perhaps principally through modesty, they will hesitate to discuss the paper of the teachers of prominence.

In many of our smaller societies, the attendance at the meetings is several times the number of men in the county, the attendance being principally from surrounding counties invited to the meeting. This, of course, requires more effort on the part of the secretary but unquestionably pays. One of the most frequent troubles in the office of state society secretary comes through the local secretary not enforcing the by-laws of his society, relative to the payment of dues. The by-laws of our society state that all members who do not pay dues for the current year are dropped from the membership list automatically on December 31. During this year for which they are delinquent, they have received all of the benefits of the society, have received the Journal, the Medico-Legal and Legislative pro-

tection and it is quite fair to ask them to pay for the delinquent year before they are reinstated. We frequently receive the information in reports from county secretaries, that Dr. Blank dropped out last year but has decided to reinstate and we enclose dues for the present year. This is prohibited in our by-laws and we repeatedly are required to write the local secretary that he must remit for the delinquent year before the reinstatement is permitted.

By keeping this in mind constantly much time and trouble can be averted from year to year.

The removal of names from the membership list in the state society requires in every instance the writing of no less than five or six letters, then the subsequent reinstatement of a similar number. Supposing that we consider as a minimum, one hundred fifty members lapse and are reinstated annually in our society, we can see the vast amount of correspondence necessary for this one factor.

The efficient county society secretary will report all new members promptly, sending in his remittance with the report, so that there will be no delay in giving the new member the benefits of the society. The annual dues of members should be remitted at least once a month. A few of our societies send in an annual report at the end of the year which causes much work and confusion within a short period, which should be distributed throughout the year. With this system which we might call the "Delayed Report System," the society is compelled to carry the names of many who have dropped from the membership list, some who have been dead several months and others who have removed from the state. These, of course, cost the state society a considerable amount of money each year.

The ideal secretary should be at all times informed as to the various activities of his state society and be able to answer questions from his membership relative to the same. He should know that besides the JOURNAL, the society gives the best possible medico-legal protection, the best legislative service, and our highly efficient Lay-Education Organization which has done much good work during the past two years. In addition to these, he should remember that it is possible to arrange for post-graduate meetings by applying to the lay education committee and those of you who have already had this newer

service realize the value of it to the county medical societies.

You are frequently asked to give advice or make suggestions to the Lay Education Committee and to cooperate with them in many of their undertakings. In those counties where there has been the proper spirit of cooperation, you will see all health activities undertaken by all lay organizations under the guidance or supervisions of the county medical society. Our lay friends are anxious to do their part, if we will aid them and direct them. Without such assistance from medical men, they would be unable to work to the best advantage of all concerned.

The movement for periodic health examinations and the examination of the pre-school children are both going to be major activities and require a high and efficient degree of team work to make them successful. The county society and its secretary have an important part to play in this movement and the results will be directly dependent on your efforts and assistance. These movements should be talked over in the society meetings. If you need additional information from that received through the JOURNAL and other sources, write the Lay-Education Committee and you will get all the assistance available. In a consideration of the duties and responsibilities of the ideal and highly efficient county medical society secretary, we should not overlook our responsibility to the American Medical Association. The county society is really the American Medical Association and we should all be proud of our affiliation. We should know what that great organization is doing to protect us in our work. We should know which of the newer pharmaceutical products have been accepted by the Council on Pharmacy and not experiment with all preparations placed before us by enthused salesmen. We should know what they are doing to protect us in their Bureau of Investigation, as shown in many of their publications, many of which are on exhibition at this meeting. We should be acquainted with the many other departments and bureaus, so that we shall not only be proud of our fellowship but persuade other members of our society to affiliate.

It is my opinion that a successful county society secretary should retain his position so long as he renders the proper services to his society. The practice of changing secretaries as

often as the other officers of the society, is not a good one.

We are told that everything in the world that is worth having takes considerable effort to acquire, and nowhere is it more true than in the case of the county secretary. He must make personal sacrifices to be truly successful in his office.

At the last session of the Illinois legislature there were forty-nine bills introduced which would have, in some way, been detrimental to the medical profession had they become laws. Fortunately not one of them passed both houses and received the Governor's signature. It is no longer necessary or advisable to send a big lobby to Springfield while the legislature is in session, to protest against some impending legislation. The chairman of our legislative committee will tell you more of this phase of our work, in his talk before the conference. The 100 per cent efficient county medical society secretary should have his eyes and ears open all the time. He must work for the interests of his society every day, including holidays. He should realize his many duties and responsibilities. He should arrange meetings as frequently as possible, so that the interest of his members will not wane. The motto, "He profits most who serves best," is well adapted to his work and even though he may not get the credit that is due him, he will have the satisfaction of knowing that he has been a successful executive and that those who follow him in a like capacity will have a precedent established that will stimulate them to work for the interests of the society in the future.

DISCUSSION

Dr. J. S. Templeton, Pinckneyville: If anybody needs sand in his craw the county secretary needs it, and our county I suppose is the same as other counties; you have to go after some of the fellows as much as four or five times before they pay their dues. They go along and after a while their JOURNAL stops and they call you up, and when it is explained to them they say they paid their dues last year. They never have a receipt but they are still confident they have paid. The only way to treat a fellow like that is to go after him every month. Send him a statement or go after him personally and show him he is not paying his dues. Usually that class of fellows will pay up and your membership will stay what it was before; then if you get a new one or two you are ahead.

At the beginning of the year if you do not watch this thing they will put you off and after a while they claim they paid their dues. As Dr. Camp said, we all know what it would be if you had one hundred fifty

who did not pay promptly. The Doctor knows I am guilty along those lines, as my men have lapsed and I wanted to get them in again and when they claimed they have paid we have either had to have the records looked up as high as three or four times or check up to get my list straightened out.

Dr. Hamilton, who was to follow Dr. Camp, is one of the efficient secretaries of our state. By the first of April last year he had every man who belonged to his county society paid up. He went after them personally and said he wanted the money and he got it. It is the only way you will ever get it at the proper time, and save our state officers and yourself much trouble.

If we could have the whole state society here to listen to Dr. Camp, Dr. Chapman and Dr. Gilmore telling their experiences we would have fewer men trouble the county secretaries.

Dr. W. F. Grinstead, Cairo: So basic a paper as that, coming from such a source as it does, going right down to the smallest nut we have to crack, ought not to be passed with just the discussion of the financial features of it, as the secretary has so entertainingly done.

I have had all the offices in county and district medical society except treasurer (they never would let me have that), and as I have said to this society before, perhaps, I am an old medical society rounder—I never miss anything—and I am always a better doctor when I go home than when I left, and I have heard something and seen something of all these things that pertain to the secretary of the county medical society. I belong to three district medical societies, Southern Illinois, Southwestern Kentucky and Southeastern Missouri. In Southeastern Missouri at their last meeting in October they elected a new secretary. About a month after that election I got a letter from this new secretary in which he said, "Dear Doctor, won't you please point the way for me in assuming these duties? I have not had much experience at it, and I want to get a good program for the next meeting. I want to get a program that will interest the members and get out a large attendance and insure a good time." One of the things I said to him (and about the only thing I will have time to discuss here now) was "Don't take *no* for an answer. When you write one of your members that you know can get busy and write a little paper, and he does not answer you, write him again and again. Call him up by long distance telephone. Tell him he does not have to write a great long paper, that his paper should require only ten or fifteen minutes to read it. Tell him the discussion is often better than the paper. If you don't get action out of him, try to find out, if you have not already learned, what line of his work he is most interested in, select a subject for him, write it to him, and tell him that the district Medical Society wants him to prepare a little paper on this particular subject because he has been interested in that subject, and you can get the society something that will interest everybody."

Assign a subject for them. Sometimes a fellow can

not decide for himself what he wants to write about. If someone picks a subject that he knows, from his acquaintance with him, he is interested in, you will often get a paper in that way.

Dr. J. W. Hamilton, Mt. Vernon: This is my first opportunity to attend a secretaries' meeting, and I do not know just what is expected of me to say. I am glad to tell you people that I represent one of the counties in the state of Illinois that is one hundred per cent. membership. Now there are not very many, as I understand, that have a full quota of members belonging to the county society. We have, and have had for two years now, a hundred per cent. membership, which is twenty-eight or twenty-nine physicians in our county, and our average attendance is more than thirty-five at each meeting. That means of course we had quite a number of outsiders come in.

Now, just what it takes to keep a society up is hard work and engineering. Our society got run down a little bit a few years ago and Dr. Hall and I decided to build the thing up if it was possible to do it. We have a good representative body of physicians there and they are active fellows, but they are like lots of other men—they get into the secretary's place and they are busy and they neglect the things that are fundamental to keep the society going. Dr. Hall took the president's job and forced the secretary's place over on to me. We went about getting our membership up, and went to visit every doctor and persuaded him to join the society. We got men out from a distance that were able men, mostly with lantern slide facilities, and each month they have given us wonderful lectures that were worth something to all of the doctors. We mixed it up; we did not get all surgical or all medical or all one kind but we mixed it up so each doctor would share in each of the meetings. We had such men as Bransford Lewis and men of his caliber there. They were glad to come out with us and spend the evening and certainly enjoyed it as well as we. Then we went to work after that and began sending out to our adjoining counties, asking the other doctors to come in from other counties, and I think we have been a stimulus to some of our adjoining counties.

We took McLeansboro, that is Hamilton County, in through the Board of the Council. They permitted them to join with us. They could not keep a society up, and they are in close proximity to us and it has been quite a help to them.

Now at this next meeting we have a symposium on pneumonia. Dr. Neilson of St. Louis, a man whom many of you know, and a very able man, and some of his co-workers, are coming to give us what is said to be one of the best symposiums on pneumonia ever held by the St. Louis Medical Society. We are sending out about two hundred invitations to our adjoining counties. We not only ask them to come to our meetings but we visit those societies. I was in Benton the other night and enjoyed myself. I do not believe any body of men can keep a society going that stays within itself. They have to mix with other doctors in order to enthruse them to want to come back and return the visit; and when you give them something

to entertain, to justify them for the loss of time and their trip, they are going to appreciate it. The hard roads help us a great deal, and we have had eleven meetings. I see from some of the reports from some parts of the state they have only had five meetings and sometimes only four at the meeting. At our eleven meetings there have been not less than thirty-five at any one meeting, and part of those were rainy nights. We would have had the twelfth meeting had not the Southern Illinois Medical had their meeting on the night our meeting should have been. This is the only way I know to keep life in the county society, is to put it in there, go to other societies, and invite other men to come in and get good material to entertain, and I believe the secretary can keep the society up to par or better.

Dr. Elizabeth R. Miner, Macomb: It is not only the collection of dues that is one of the hardships of the county secretaries, but my worst trouble has been the writing of letters to the different doctors and getting no answer—just simply ignored altogether. I see some of you smiling. I think a good many of you have had that same trouble.

How to keep up interest in your society. I think we have had wonderful meetings in our society, they have been very interesting and the members all take part, but at the last meeting one of the members said to me, "Well, you are only having entertainment, I want something else. You are having outside speakers come in, but why not have something local?" So we are going to have our own members speak and try that awhile.

Then how do you get outside doctors to attend? We got up a wonderful meeting and thought we would have all of the doctors from the surrounding territory at our meeting and it rained that day and we did not have anybody come in from the outside at all. You know how disappointing that is, at least to the secretary. I do not know how to get the outside doctors to attend. I would like to hear.

Dr. Harold Swanberg, Quincy: The one thing that I wish to discuss in regard to Dr. Camp's paper is the method to be used to secure participation in society programs by the members themselves. For some time we have been using a method in our own society which is applicable to any of the smaller county societies. This method consists in having the members present interesting case reports, assignments being made alphabetically. A case report is something anyone can give. A great many men are afraid to get on their own feet to present a formal paper but will be glad to discuss one of their own interesting cases. We have been having the members of the Adams County Medical Society present case reports in alphabetic rotation for the past two years. I am sure that this has resulted in many members addressing the society who otherwise would have never done so. These case reports only consume fifteen or twenty minutes and do much to make the individual member take more interest in the programs of the society.

Dr. W. J. Benner, Anna: I happen to be a secretary of one of the smaller societies and something was

said about the collection of dues being rather difficult.

I don't know that I have experienced a great deal of difficulty in getting in the dues, not even this year when they have been raised considerably, but a number of men make this statement: "State dues are getting pretty high, when we have levied sufficient to carry on our own activities it makes it amount to something and if they get any higher I do not know as I am going to maintain my membership."

We are told the chief reason for that is the protection, which costs them considerable, and they themselves have their own protection or insurance and do not favor the protection of the Medical Society. I was wondering how many of the secretaries here have that same experience, if the idea was really popular and if the expense was going to increase, would it not be better to discontinue that if we are going to lose membership, and let the individual carry his own insurance.

I would like to hear from Dr. Camp in that matter.

Dr. Wm. D. Chapman, Silvis: There is one thing which has not been especially emphasized this morning, which I would like to mention, and it is the relationship of the county society secretary to the state society as well as to his own county society.

You have here this morning at a conference of county society secretaries the general officers of the society, the President and Secretary and the President-elect and as many of the Councilors as have been able to get to town so early. I wish to cite this as an indication that these officers of the society regard the county society secretaries as members of the family. I should like it if the county secretaries would get the idea that they as a group do constitute a sort of enlarged council, a group for the carrying out over the state of the policies of the council. The Council and House of Delegates of the state society must have policies and somebody must carry them out. If the county society secretaries could all convince themselves that they were members of this official group in carrying out policies of the state society I believe that in many instances their own personal estimation of the job which they hold would change.

The county society secretaries as a whole should feel a very much greater pride in service than some of them have shown in the past. Pride in service, respect for the job which you hold, is a thing which will make for greater efficiency in the conduct of county society work. The county societies are no longer isolated and the fact that they are units (and operating units) of the state society is one which should not be belittled or in any case overlooked. That one item, I think, is a thing which should be brought home to some of the secretaries of the smaller societies. They are not being overlooked; they are being begged to come in and consider themselves a sort of general staff, if we might word it that way, in the carrying out of the policies of the council, and they are a cog without which the society can not function at anything like one hundred per cent. efficiency.

Dr. H. M. Camp, Monmouth: I intended to mention that our Society has three very highly efficient

lady secretaries. I would suggest that the societies occasionally select a lady secretary.

In regard to the matter of dues, I would like to answer the doctor's question. Of all the larger state societies, I believe that our Society collects the smallest annual dues. A great many societies have annual dues of ten dollars, some have fifteen, one twenty, and one twenty-five.

What are we getting for the amount we pay? We pay eight dollars per year. We get the JOURNAL. We have many subscribers, both in this country, and in practically all foreign countries. The local subscriptions are three dollars, and the foreign four dollars per year, and they are all glad to pay these amounts.

We have our legislative protection, and one of the things I mentioned in my talk was the fact that at the last session forty-nine bills were introduced in our legislature, any one of which, had they been passed, would have in some way affected the practice of medicine. Every one of these measures was killed; not one became a law. That is what I call service. Dr. Neal may give additional information on this subject in his talk this morning.

Then we have the medico-legal protection; adequate medico-legal protection in an insurance company would cost twenty-one dollars per year. We are collecting one dollar fifty cents per year from each member for the service. I do not believe that any member can afford to be without it, and if you can get this service for a dollar and a half, surely this ought not to be considered an extravagant expenditure.

Some of our non-medical organizations, as the osteopaths, pay fifty dollars per annum for each member, and all they get is partial protection, which they call legislative service. Their money goes to lawyers to try to get bills through which would favor them in some way; perhaps they want to practice obstetrics, give vaccines, serums, or something of that sort, and want a measure that will permit them to do these things—that is what they expect for their fifty dollars a year.

We have been told that the Chiropractors pay one hundred twenty dollars a year, or ten dollars a month, for a similar purpose. They thought they were going to buy a practice act in Illinois a few years ago, but failed to do so.

I do not believe any of our members should think eight dollars per year an exorbitant fee for a year's protection, with the other benefits gained through membership. During the past three years we have had two malpractice suits in Illinois which cost the Society something like eight or ten thousand dollars for defense. I am sure that the members defended in these cases would like to be here this morning to discuss the subject of dues.

Dr. Chapman and Dr. Neal can both give more information on this subject than I, and I am sure that they can tell why it was necessary to increase our annual dues from five to eight dollars per member last year.

POLITICAL ATTITUDE OF PHYSICIANS*

J. R. NEAL, M. D.,

SPRINGFIELD

If we accept the word political, as contained in the title, to mean "pertaining to public policy" I shall attempt to give you my thought regarding the political attitude of physicians, but if I had to sum it up in two words—it would be "extreme tolerance." Even at the risk of being criticized I submit that all county secretaries and the officers of our state society are politicians—not the kind we see headlined on the front pages, for you are the thinking body that has the management, the policy if you please, of this society ever at heart and ever in mind, and it is that angle that I am attempting to describe, mindful, of course, of the excellent professional ability and the fine ideals for which the medical profession stands, but after all I am firm in my belief that our political attitude at times, at least, is one of insufferable altruism.

There are very few, all too few, of our able men, of which this society has hundreds, who really take an active interested part in its management. There are too few of us who are willing to take a sufficient amount of our time to give this very important matter its proper consideration. There are a few, however, who give more than their full share of devotion. I can only point to such men as Dr. Krafft, your president; Dr. Whalen, your editor, Dr. Chapman, chairman of your council, Dr. Camp, your secretary, and your councilors, together with a number of others who are not only making a meeting of this sort possible, but throughout the entire year are carrying on. Dr. Whalen is sitting in the room—am glad he is here. I told him I was going to say some mean things about him, and he said: "You cannot think of anything that has not been said"—so I have his full permission to say anything I please.

Now, let me read you a quotation which is as follows: "The American public is easy game for the promoter who has something new to offer in any field of enterprise in the healing arts. It is our American fashion to look for remedy to a new Federal bureau or a new this or that, but we need not more laws or more bureaus or more amendments in the solution of our problems." And let me read you another quotation from a

*Given before the Secretaries' Conference, Illinois State Medical Society, Champaign, May 18, 1926.

speech which says, "The state in its attack upon bureaucracy should not be induced by coercion or by favor to surrender the management of its own affairs. No method of procedure has ever been devised by which liberty could be divorced from local self government; no plan has ever been adopted which did not result in tyranny, reaction and decline."

If I should submit these quotations to a group of members of the Illinois Medical Society for a vote as to who said them, I would be willing to wager that the majority would say, "That was Dr. Whalen." I would be willing to say some would charge him with being radical; some would say he was running wild and that there is no shadow in the foreground that would necessitate such utterances, and I have no doubt you have in your own minds, or you have talked with people, who would maintain that the language of those two passages that I have just read, is entirely too severe. Now let me tell you that the first quotation I read was taken from the daily press a few days ago and was spoken by Professor Robert N. Corwin, Chairman of the Board of Admissions of Yale University, and the other quotation which exemplifies so closely the opinions of Dr. Whalen which we have read in our own State Journal the last few years, is taken from the speech of Calvin Coolidge at Williamsburg, Pennsylvania, three or four days ago. So it comes to pass that the President of the United States and one of the administrative officers of Yale University in a subconscious manner, at least, endorse the editorial policy of Dr. Charles J. Whalen.

The speech of the President of the United States is no more pointed in its meaning than a great many of the editorials in our JOURNAL along this same line of reasoning. It was these editorials that the proponents of the Sheppard-Towner Maternity Act attacked in a printed leaflet, entitled: "Another word on the Maternity Bill," and it is very plain that in their answers they evaded the very issue, *i. e.*, States Rights, which the President of the United States has laid down, in what is termed as the most outspoken speech of his entire political career, and stood for the very thing that the JOURNAL has always maintained is necessary for the state of Illinois. I am saying that in no defense of Dr. Whalen, but I believe it thoroughly vindicates his policy as set forth in the editorial attitude of

the JOURNAL. I am not endorsing everything Dr. Whalen says. He has frequently told me there are a lot of things I do that he does not like so I am simply getting back at him.

So I maintain physicians are too tolerant in matters of this sort.

When Senator Reed, in 1921, opened his speech in the Senate on the Maternity Bill, which is undoubtedly the finest tribute to motherhood that it has been my privilege to see or hear, in the preamble to his speech he, in addressing the President of the Senate said: "Mr. President, give a bill an attractive name, an appealing title, back it by a well-organized propaganda abundantly financed, and an active lobby of persuasive ladies who solicit and pledge votes, and that bill, whether it is good or bad, wise or foolish, is almost sure to pass." I would be glad to have you check me as to whether those are Senator Reed's words, for I am quoting from memory, but it always appealed to me as a political axiom.

Now, in the Illinois legislature last year there was a bill just of that type; it was a bill aimed to curtail the activities and functions of the health department, mainly Chicago, and the proponents of that bill were our ever present "League for Medical Freedom," composed of some persuasive ladies and a few petticoated men. The good ladies were down there telling stories that babies were literally kidnapped from their mothers' arms, when they had a suspicion of a contagious disease, and whisked away to an isolation hospital. They told further that a nurse would go to a front door and entertain the mother while a police officer or an officer of the health department would climb into a back window and take the child to an isolation hospital. I am bringing these thoughts to you because that bill on that kind of propaganda backed by the persuasive ladies, backed by that story succeeded without any argument in passing both the Senate and the House. It proves conclusively to my mind that legislators are not sufficiently interested in what might be termed bills of minor importance, and while I am not describing the doctrine of health matters as of minor importance, it is looked upon as such in the legislature. The bill was passed, went to the governor for signature, and a sizable group of us protested and the governor was very interested and saw the atrociousness of the bill, which purported to make the health authorities get a court order

before they could even enter a home to make an investigation to ascertain whether there was a contagious disease there or not. The governor vetoed the bill.

I am not saying these things because I am condemning the legislators. They had fourteen hundred bills there last year, with which they should have been thoroughly familiar, and it was a physical impossibility to be fully cognizant of their contents before they registered their votes; in other words, if a properly organized information committee of physicians is not kept ever alert in the legislative halls, not only of the several states, but also at Washington, these dangerous bills come cropping up, go on their way and become laws and then we sit down and criticise them for the negligence and unfortunate conditions that the public is placed in when the laws become operative.

May I not ask your further indulgence by attempting to substantiate my charge of our political tolerance by several other important issues of the day?

I do not find that we are taking an active interest in the various amendments that have passed and are pending relative to the United States Veterans' Bureau. Now, I am speaking as an ex-soldier. I was in the service twenty-two months and I really feel I have the right to criticise bills of this sort where probably some who did not serve in the war might feel some little fear.

I would like to ask you why any ex-service man who is amply able to pay for his own hospitalization, in the event of a chronic illness or a surgical operation having no connection with his military service, should become a charge of the United States and be treated at the expense of the public fund. Does it really follow that the man who served his country should come back and be placed upon a charity basis? Is patriotic valor to be rewarded by a paternalistic attitude? In the original Veterans' Bureau Act, passed way back in 1918 or 1919, we have words to the effect that treatment is for "disabled persons, discharged from the military or naval forces of the United States," and then later on in 1921 we find a safeguard in the amended act making such treatment incidental to those diseases or injuries "incurred in line of duty." Then later along comes another amendment that

it is necessary to apply for such treatment within one year after discharge. Even as late as March, 1924, we find the wording, "If wound, or injury, or disease was incurred in line of duty and not caused by his own wilful misconduct." In 1925 another liberal amendment became a part of the law with the provision for "Hospitalization and necessary traveling expenses to veterans of any war since 1897 without regard to the nature or origin of their disabilities," and then it further provides that preference be given to those financially unable to pay for hospitalization or traveling expenses. Inferentially, at least, a millionaire ex-service man is entitled to traveling expenses, hospitalization and care of the Government if he chooses to avail himself of them, and if there is no bed for him the director is authorized to employ additional facilities to accommodate him.

There is no more reason for the soldier who is financially able, and cannot trace his disability to his military service, to become a charge of the government than there is to allow the firemen or the policemen throughout the United States, who are daily risking their lives, to have the self same service at the expense of their government.

In 1926 another amendment is being considered in Congress that in addition to the endorsement of the liberal provisions that I have just spoken about, we find army nurses, contract surgeons and contract dentists are to be included. And then there is a movement on foot to include civilians who were connected in any way with the army during the recent war. It is not difficult to conjecture that more liberal amendments will be considered in the future, which merely means that more physicians, and more hospitals will be under federal control for the treatment of those who have no rightful call on the government for the relief of their ills.

I happen to be secretary of the U. S. Bureau of Pensions for our district and there is a law that gives every soldier of the Civil War fifty dollars per month after he has reached the age of sixty, irrespective of physical infirmity, and then if he is incapacitated to a certain degree he receives the maximum of seventy-two dollars per month. I have had old soldiers come into our office who were very wealthy, and because the law says they were entitled to that seventy-two dollars they claim it. We have dozens of such men

who are not in any way charges of the county or state and yet the law pauperizes them.

I would be the last one in the world to say anything that would detract from the patriotism of this thin line of gray haired men who fought the Civil War, but I am saying when in our present day we have a hospital bill, as provided in the Veterans' Bureau, under which thirteen thousand patients were hospitalized last year, which was seventeen per cent. of all cases that were hospitalized, and who had no claim on the government from the standpoint of showing their injuries or illness were an incident of their war service it is wrong—all wrong. These men cost the government five million dollars.

Please do not misunderstand. I believe that the government cannot do too much for the sick soldier, whose disability was incurred in line of duty. I believe that every scientific treatment known to the medical profession, and every appliance incident to surgical treatment, irrespective of cost, should be freely furnished those men whose service rendered them ill or disabled.

If the liberalization of this act continues it is only a step further to see how the proponents of such measures will advocate the necessity or at least desirability of including the children and all the dependents of soldiers under the same hospitalization privileges, irrespective of financial status or disabilities traceable to a military source. Professional indifference regarding the political attitude is in my opinion a factor in all this.

I think we place too much confidence in our Federal Government in such matters, which is after all merely a group of citizens selected from each of the several states and who sojourn at Washington. We find lay propagandists can work with very much better concentration of effort in Washington than they can in the forty-eight different states.

Another instance of professional apathy which should have aroused every medical college in the nation is when the Secretary of Labor authenticated some six or seven chiropractic colleges as being immigrant educational institutions, which allows foreigners to merely say they want to go to a certain chiropractic school, and even if the quota of that country has been filled they are allowed to enter because the school is on the list of accredited scientific universities. Of course the chiropractic schools have been very prompt

to realize the good propaganda this is, for tacitly at least the United States has approved the schools as accredited schools and so notified every United States consular office throughout the world. They have their representatives in Europe, and any foreigner saying he wants to go to the United States, and is carried on the roll as a resident student of that school, is permitted free passport by the United States, which is another situation that certainly demands our attention and certainly shows our tolerance in things of this sort.

Frequently people are only aroused when individually wounded and many of us may aver that the Maternity Act is not desirable, but individually it does us no harm. Others of us may argue that the Veterans' Bureau is too liberal, but there is no necessity of being unduly alarmed. Then again others may maintain that the approval of chiropractic schools as accredited schools of learning by the government with no thought of first investigating their scientific standing may be wrong, but certainly not a thing for physicians to assume any of the blame for or worry about.

I will call your attention to one more federal activity, which may be closer to home, i. e., the present pending amendment to the Narcotic Act now before Congress, and probably it may kindle the fire of protest in some of us. Briefly the amendment purports to empower revenue collectors to refuse narcotic permits to those physicians whom they *suspect* to be drug addicts.

In my experience in life insurance in reviewing thousands of inspections on applicants, not infrequently, will the inspector say, "He looks like a dope fiend," when upon investigation it is found that the applicant is a thin, fallow looking individual free from any narcotic habit. Such errors of impression would be made of men in this room by internal revenue inspectors, and in a like manner that physician would be compelled to go to law to prove his innocence or go without a permit to prescribe narcotics.

Again the proposed law authorizes the pharmacist to decide whether a prescription for narcotics is necessary and has been prescribed in an ethical manner. Physicians will have to register and report each dose of any narcotic administered. They are not privileged under this act to treat an ambulatory addict. These and several other unheard of provisions are contained in the amendment, which our all too complacent medi-

cal body will have to adhere to if it becomes a law.

Now, after all, our job starts at home. If it is well for us to criticise and, even to advise the federal government, and if we, in our daily work have time, inclination and ability to advise our state government or even our city government, then if you accept my idea of politics as being more than the mere management of any association, corporation, village, medical society, etc., our job as I see it is to have an organization within ourselves that functions at all times.

It was my pleasure in the last six or eight weeks to go with Dr. Munson, your councilor, to each of the component societies in his district, and I was agreeably surprised at the willingness of the medical men in the lesser populated communities to do something and have programs that are worth while. We addressed groups of physicians as few as seven and then on up to more than one hundred. Our organization reminds me very much of the army. You all know, I believe, how an army is formed. General Pershing at the head of the A. E. F. had nothing to do with the battle array except in an executive sort of way. The army is composed of integral parts, of a certain number of divisions; each division is composed of regiments; each regiment of battalions; each battalion of companies, each company of platoons, and finally you get down to a squad of men composed of a corporal and seven men. That is the unit of the U. S. army. And so your county society is the unit and if the small society in the state of Illinois does not function, if the secretary of that society has not a vision, if he does not have the idea that the society is just as important as the Chicago Medical Society, he is in my opinion derelict in his duty. There could be no American Medical Association without state societies. There could be no state society without county societies. There could be no county society without members.

It seems to me that on the shoulders of the secretaries of this society rests the work of the society. Now when it comes to a matter of finance, which all organizations must necessarily be interested in, it would appear to be an easy task to go out and tell any thinking doctor in your district all that is being done for him for the amount of dues that he is asked to pay.

The lay educational committee last year func-

tioned in a most efficient manner, but a few of the societies did not understand all that it was doing; they wanted to know more. When we told them of the different activities of the committee they were all pleased and willing to lend their aid. We were pleased to hear from a great many of these small districts of their receiving information that the lay educational committee had kept up an intimate contact with lay organizations. The result was that the leaders of the Federation of Women's Clubs deemed it inadvisable to carry on an attempt at the last legislature to put over the maternity act. And if the lay educational committee had not done a thing else they returned in this service alone the full value of dues to each member.

In closing I will ask the privilege of reading a short paragraph from the little pamphlet I picked up downstairs at the history exhibit. I like the thoughts it contains. Speaking of the early doctors, it says:

Records reveal that earliest physicians were community leaders. Men far above the average intelligence of their day, they were sought as sword and buckler of the people. Their task as public servants involved legislative, judicial and executive labors in the machinery of government. In a word the early doctor was supposed to keep the mechanism of environment running as smoothly as he did the mechanism of the bodies of the citizenry. As time passed physicians found their own profession so exacting and absorbing that they refused the additional burden. The divorce of the church and the state has been scarcely less sharp than the divorce of medicine and the state. For this relief from burdens civic, the medical profession and the citizenry are beginning to pay too heavy a price. Handicapping legislation is resulting in the practice of medicine being mismanaged by lay people. Insidiously the work has found a foothold. Only by direct combat can this evil be undone. "History repeats itself." With eyes opened, the physicians of today will realize how necessary it is for them to resume the burden borne by their pioneer forebears.

I do not know who wrote it. Again I will charge it to Dr. Whalen. But I will say that this is a day when we must think of things. Act if we will, but it is certainly before us, and we cannot get away from being charged with negligence in the care of the public health if we are going to sit idly by and merely criticise, because after all there are many high idealists in the lay organizations, who are attempting to do these things, and I find they are very willing to listen, if properly apprised by our profession, so I trust the small local societies throughout the state of

Illinois will take on added individual responsibility because they are an important part of the Illinois Medical Society.

DISCUSSION

Dr. E. W. Fiegenbaum, Edwardsville, Ill.: You have just been permitted to listen to the words of a man who I believe has done more for the interests of the medical profession, at least in a political way, than any other man in the state of Illinois. I fully endorse all that he said, and I fully endorse the plan on which he and his associates have been working for the interests of the profession.

You have heard that forty-nine bills more or less obnoxious were introduced in the last legislature that would have been vitally detrimental to the profession. Who killed those bills? Did the physicians in their offices scattered throughout the state of Illinois kill those bills? No, they were at home tending to their own particular business, but fortunately the State Society in its wisdom had some men on guard in the state capital and the killing of those obnoxious bills was the result of their endeavor. I know something about the medical politics of this society for quite a number of years. I will not say just how many. And I know that at no time has there been as consistent a plan for promoting our interests and killing of opposition as this State Society is working under right now. The Legislative Committee, headed by Dr. Neal, does not ask you to leave your homes and rush up to the state capital whenever a bill is presented that we do not like. On the contrary, they ask you not to come up there because you could do no good after you got there; but you can do a world of good in your own home, in your own counties, if you would just listen to Dr. Neal and his Committee and do what he says for you to do. He will write you a letter to do something in your own neighborhood that takes but very little time, very little exertion and would do a world of good. He asks you to go and see your Representative who lives as your next door neighbor; maybe you are his family physician, and he asks you to sit down with that man in his home at the fireside and talk this matter over with him and show him how detrimental that would be to the community at large, as represented by the medical profession.

Some time ago it was my pleasure to sit in the House of Representatives talking to one of our legislators and a very obnoxious bill was under consideration. It was about to come to a vote, and he said, "Doctor, I want to show you just our position in this matter," and he opened a drawer of his desk and he took up a stack of letters, fifty, sixty, maybe seventy-five, written by the proponents of that bill, our good friends, the Osteopaths. All letters written by Osteopaths or their friends were in his desk. Now, he said, I want to show you with what an avalanche of unanimity the medical profession has written me, and he pulled out another compartment and showed me three letters.

Among others in my immediate neighborhood I appeared before a committee in the legislature on a

certain bill. When we got into the committee room one side of the room was filled with the friends of a measure that they wanted to put through. I will estimate the crowd at seventy-five to one hundred, and at the head was a paid attorney, from Chicago, who made a very eloquent speech. He ripped the cerulean blue from one end to the other and when he got through the American eagle didn't have any tail feathers left. On the other side of the table were five doctors. Well, needless to say, we did not impress that committee as though we wanted that bill killed very much. That has been the attitude of the medical profession in Illinois.

Dr. Neal very gently says the attitude of the physician toward these measures is very tolerant. That is a fine parlor speech. He is more than tolerant. He is absolutely indifferent and is asleep. He does not even know that that bill is up before the legislature until after it is passed and somebody steps on his toes and then he begins to yelp.

Dr. Neal wants you to help him in a way that will cost you not a cent, cost you but very little time, and it will be tremendously effective, and that is to stay away from Springfield, stay away from the legislature. Unless you are schooled and versed in a way to approach the legislature you do more harm than good, but do your work in the home, with your personal friend, the Senator or Representative from your district. Talk to the man as though you meant it, as though it were a matter of life and death to the community and that the average doctor is in favor of killing a certain bill, or promoting another bill that is in our interest. Too little of that work is being done.

I want to close with a prediction and I want you to understand that I believe in it with all my heart and soul, and it is this—if we could have a united profession all over the state of Illinois, bent upon the one object of promoting good bills and killing obnoxious bills, it would be but two or three sessions of the legislature until we could have a medical practice act enacted in the legislature that would not allow a man to practice medicine in any department whatever until he came through the one door that all of you men have had to come through. Another thing, it would take but two or three sessions of the legislature, if the proper spirit was developed in the state of Illinois, before every obnoxious piece of legislation would be wiped off the statute books.

Dr. Charles J. Whalen, Chicago: First I want to compliment Dr. Neal. I think he made the speech that I was intended to make and they called upon him. The only difference is that Dr. Neal can tell it so much better than I can.

I am reminded of a little story I heard at one time at one of the sessions of the legislature at Springfield. They said there was a man who hung around the legislative halls and I think his name was Peters, Jim Peters. He was an attorney, practicing in the city, and handicapped because he stammered. One day one of the legislators in his idle hours said, "Jim, who is the greatest lawyer in Springfield?" He replied,

"Jim Peters," in his stuttering way. The legislator said, "I think you will have a great time to prove it," and Jim answered, "I don't have to prove it, I admit it."

I will admit some of the things that have been said here regarding the policy of the ILLINOIS MEDICAL JOURNAL at the outset of our campaign along the line of combating vicious things in government. The JOURNAL met with very little co-operation and I will tell you very frankly it was somewhat of a discouraging campaign on the part of the editor. But time has mellowed the situation and today it is a great deal of satisfaction to me to know that, as Dr. Neal says, the great men of the country are taking the very attitude that the JOURNAL advocated a great many years ago.

One of the regrets in my career in medical affairs is the fact that I did not do as I wanted to do when the Harrison Narcotic Bill came up, and that was to fight. I did not believe the bill was right in principle, and of course time has proven that it is not the correct way of handling the narcotic situation. Instead of improving the narcotic situation in the country it has caused it to grow worse. When the Compulsory Health Insurance movement came up I recall meeting one day the secretary of the Committee on Health and Education of the American Medical Association. He asked me what we were doing to cooperate with the proposed Compulsory Health Insurance Act, and I said "Nothing." He remarked that he thought it was time that the Chicago Medical Society appointed a committee to deal with this work and so that was the beginning of the health insurance movement in Illinois. I was told by the gentleman mentioned above that "Compulsory Health Insurance was coming regardless of anything we might do and that the proper thing for the society under the circumstances was for it to go in and get the best bargain possible." I reported this conversation to the members of the Council of the Chicago Medical Society and very promptly was asked to serve as chairman of a committee on compulsory health insurance. I begged to be excused but was told the only function I would have to perform would be to call the committee together. That seemed to be a very simple proposition. We started out with the idea that we had to cooperate with the compulsory health insurance movement and attempted to get some data along that line.

Over Cook County in the various branch societies we staged a program on compulsory health insurance. The officials of our great American Medical Association were proponents in the movement. Their names were on the literature, the letter heads and the advertising of the proponent organization. They were all on the literature of the advocates of compulsory health insurance and were all in favor of it.

When our first meeting was held in the west side branch of the Chicago Medical Society the proponents had their inning. Then up from the ranks came a man least expected, Dr. Edward W. Ochsner, who opposed the adoption of compulsory health insurance. He told about his experience with its operation in

Germany, where he had worked under it when he studied abroad. This was the first inkling we had that compulsory health insurance was not what it was represented to be by the propagandists in this country. Then and there a few men such as Dr. Ochsner, Dr. Chapman and eight or ten others started in to oppose the officials of our own mother organization. And gentlemen, if you think it was any pastime, any pleasure, to go out and fight our own official family, I will assure you now that you are laboring under a delusion.

It was necessary for us to go out and fight some of our most intimate friends, but we believed that it was not the thing for either the people or the doctors of the country, so we fought it to a finish and as a result compulsory health insurance is not here to curse us. That it is not here calls for credit to be given to a very few men in this organization.

Of the maternity bill the same thing is true. We went through the same experience. Our official family was afraid of the League of Women Voters or somebody else. When we got officially into the fight I sent Dr. Humiston over to the A. M. A. and they told us over there that Dr. Work did not believe in it but some of the members did and they were afraid to take any action. So it remained for this organization again to go out and lead the fight against the Sheppard-Towner bill. How effectively we operated I presume I do not need to tell you.

A peculiar thing happened when the time came to oppose the Sheppard-Towner Bill when it was on official hearing in Washington. The State of Illinois Medical Society was the only one in the Union that was officially there to oppose the enactment. One of the insinuations thrown at Dr. Humiston was the fact that the A. M. A. was not opposing the bill. A short time ago Dr. Chapman sent me a clipping from *Medical Follies*, written by the present editor of the A. M. A., in which he gives credit to the A. M. A. for opposing the Sheppard-Towner Bill at Washington. It was of considerable amusement to me—not that we care who gets the credit particularly—what we are primarily after is the defeat of this kind of legislation, but after this State Society had waged the fight which was felt the country over, it seems an ironical situation when our friends are claiming the credit due this organization. And so we might go rambling on citing instances along the same line.

The newer menace confronting both the public and the profession is the fact that persons untrained in medicine, the country over, feel that a great deal of medical work can be either directed or taken over completely by lay people, and that is the dangerous trend of the times. We have got to fight it, and fight it by organized effort, and in no other way will you get back control of the practice of medicine to those fitted to do the work.

Now then, getting back a little way to a time long before I was editor, a man then properly or improperly designated as a highbrow, came to me and said, "Whalen, I read in the JOURNAL your article, 'Whither are we drifting?' Your prophecy on the future of medicine appears to me to be the imagination of an

overworked mind. The practice of medicine is in no danger of being ruined or taken over or directed by lay people."

Four years ago when the Public Health Institute of Chicago came into existence this same gentleman came to me and said, "Can't something be done? The Public Health Institute is going to take over the entire practice of medicine and can't you devise a scheme for heading it off?" I said, "Doctor, I remember about fifteen years ago you told me the things you are complaining about could never come into action, that the practice of medicine could not be taken over by lay people or corporations." He answered, "Yes, I thought at that time you were on the wrong track but time has proven that what you said and fought for was right."

We did have an organization in Cook County that was worth something and we certainly cooperated to bring about the defeat of vicious bills, the very things that Dr. Neal and Dr. Fiegenbaum and the other gentlemen have been telling you about today. What has happened in the past is only an indication of what is in store for you in the future if we do not thoroughly organize. Most of the men you have elected to office in this society have no selfish motives. They are men who believe in the integrity of medicine and the up-building of this organization and not one of them would sell the medical profession of Illinois for a million dollars cold cash. They are out for your interest, for the maintenance of the integrity of medical science.

Thank you.

OBSERVATIONS FROM THE STAND- POINT OF A NEW SECRETARY*

B. V. McCLANAHAN, M. D.

GALESBURG, ILLINOIS

I appear before you today purely in the role of a tyro in the functioning unit commonly known as the County Medical Society, and have been requested to give you, as the title suggests, some of my personal impressions upon assuming and taking charge of the business end of a county medical unit. You will pardon my referring to this as "taking charge," but I find that such is exactly the case.

The county society itself may not be a serious affair, but I am willing to go on record with the statement that the position of being secretary, and I mean a worthy one, is a serious undertaking. I am reminded in this connection of the story written by Earnest Thompson Seton of the little bull terrier "Snap," who led the pack of wolf hounds. Without the indomitable "Snap," the pack of hounds were hopeless; they had no

coordination, they had not the cooperation of each other that they needed in a concerted attack. But with the responsibility centered in "Snap," who takes it, they go forward and accomplish the end for which they as a pack are intended; in short, they get the wolf. "Snap" suffers, however. He not only suffers; he is killed.

In the preparation of this paper these three words appear to me to be emphasized and necessary, from our standpoint, for the welfare of the organization. They are cooperation, coordination and coercion.

There are the same tendencies in the society that are to be found in any club or body of members who strive together for the same end—that of favoritism. Oft-times in this sense toward those who are the most willing to help along the lines of progress, but at times favoritism amongst certain groups, and, I am sorry to say, to further their own interests also. This failing is a human characteristic and for this reason a county secretary should not be too human. His duties call for the last word in impartiality to be 100 per cent efficient. To respect and properly evaluate the wishes of everyone, especially a group of scientific men, is as you all know a herculean task. To be able to be always right in our judgment, even in attempting to carry out the wishes of the majority, is the task we have before us.

I wonder if it would not be advisable in a great many of the county societies, especially those in which there is a tendency to a general lack of interest, for the position of secretary to be passed around and in this way for more of the men to have a chance to see the inside workings of the organization. This attitude, I fear, would not meet with the approval of the state secretary for the reason that he has his hands full already in writing us hurry up letters on one and all matters, not the least of these being the question of dues. There are a great many doctors, for years members of their county societies, who have no conception of the time expended and energy required to carry on the society. The principal interest is aroused when for some reason or other they fail to receive a copy of the JOURNAL, and immediately they want to know the reason. In fact they do not know what the county society is, except from the program standpoint. I must admit that since I have been in this work I have come to realize more and more the importance of it all and when

*Read before the Secretaries' Conference, Illinois State Medical Society, Champaign, May 18, 1926.

I am through being secretary I will have learned my lesson and will profit thereby.

Being so new at the game I am reluctant to offer criticisms of any sort, but observations of the sort that I am trying to depict naturally lead one to wonder if there are not a few things that could be undertaken that would simplify both our work and also that of the state secretary in his routine dealings with us. I am in sympathy with him and he is a hard worker who holds his position efficiently. His task is doubly ours. He not only has to get us to do things but he also has to prod us sufficiently to get us to get something out of someone else, *i. e.*, the individual members.

We all need cooperation in the society and also the cooperation of every individual member who has any interest at all in the practice of our profession. There is too little of this in our own unit and I suspect that the same might be true of a great many other societies. This cooperation must extend further than the mere attendance upon the programs. That, of course, is necessary but a far greater help often is to be able to ask favors, requiring a little time and thought, of any of our members and leave with the feeling that they will be accomplished without further reminding. This is I feel one of the real tests of the interesting and live member. Moreover, a service on any one of a number of committees should be looked on as a duty instead of a hardship.

We need coordination in the society. We need coordination of a type that is above all the petty jealousies that are so prevalent among professional men, whether they be of our profession or any of the others. In short, the welfare of the county Unit is far more important than the welfare of any individual or group of individuals. Many are not able to see this fact but nevertheless it is true. Without exception I will state that I do not think anything is impossible to the individual county societies; nothing is too great for them to accomplish in their communities, if within the ranks of the organization there is absolute cooperation and coordination.

However, the roseate hue of this bright picture is dimmed by the fact that coercion oftentimes is more in evidence, and more to be used, than either of the above. You ask a man to serve on a committee and then you have to go around to see that he attends, or have to work

with him in order to get service. You send out your regular statement to the members, for the smallest possible amount that the organization can exist on, with the result that about ten per cent pay their membership fees during the first month. Over half the members require a second statement; some many more and some even having to be paid a personal call to keep them from being dropped from the list. Merely coercion on the part of the officers to try to keep the membership together. There is nothing active nor progressive about service in such a manner. There is merely existence at best.

Regarding the records that are required to be kept by the secretary of the society there seems to be about as many varieties as there are secretaries themselves. I doubt if there are at the present time any two secretaries keeping the same type of record, uniformly, from which all the information can be secured at a glance. Would it not be an added feature for efficiency, and also a labor and time saving device, if we could each year be furnished with the necessary sheets from the state secretary upon which we could list all the data necessary to know exactly where we are at any time? From these same sheets, or a duplication of a portion of them, could be furnished the list of members that is to be sent to the state secretary each year. These could be uniform, could be kept in a loose leaf binder especially for this purpose, which could be furnished by the state organization at a cost sufficient to cover expenses of same. Uniformity will in this respect relieve the work of the State in handling the county accounts and will also relieve the new secretary of a great deal of adaptation to different forms of bookkeeping when he takes over the new work. In this way we could change secretaries more frequently and as I have said before I think that this would be a good feature. In a recent conversation with Dr. Snively, secretary of the Fulton County Medical Society, he showed me his method of handling this situation. A sheet that he himself rules out and marks off, and on which he has all the data regarding dues, etc., and in addition the members attending each individual meeting and whether or not they took any active part at the meeting. Simplicity and uniformity will help a great deal I feel in this matter.

No criticism is worthy except it be of a constructive nature and I hope that I have conveyed

only this idea to you in my talk. We have a wonderful organization with unlimited possibilities, but we are not making the most of them. We are not 100 per cent efficient; in fact I dare say some of our organizations are not half as influential in their communities as they should and could be. My plea is that we simplify our records, that we unify them and in order that we may accomplish the greatest possible good that we exhort every member to do his utmost toward the cooperation and coordination for the best interests of the profession and the county medical society.

DISCUSSION

Dr. T. D. Doan, Carlinville: I feel that the man who assumes the office of secretary of a county medical society has assumed, as Dr. Figenbaum would say, a real job. When the secretary begins his work the first time he feels that he has much to do if he intends to be a one hundred per cent secretary. I feel that I have been largely toward the one hundred mark for for fourteen years I have been making a passing grade, and each year have passed into another year of service.

The secretary, in order that he or she may be successful, must necessarily be a politician. I do not know what that means. In other words, the policy should be assumed by the secretary that all of the members will be prevailed upon easily to part with their money. Some of the doctors have money, you know. A record kept by the secretary which might be investigated by an expert would be a very nice thing to have. Most of us do not keep that kind of a record. Naturally, if there is a program committee, the secretary is one of the program, and in many cases all the program committee.

When one has served a few years as secretary he begins to assume that he had work that is occupying a large part of his time if he is successful. What I wish to say is this—when we assume the office we should not assume too much of an attitude of a person who is a martyr; rather assume the attitude that we are working for the upbuilding of the medical profession in the county in which we live and in which we work. If the medical profession is builded up in the county it naturally will be in the state, followed by that of the national.

If you will pardon me for contradicting your statement, Doctor, the secretary naturally should assume the place one year and keep it until he dies of old age. He can do more with the society, if he is a capable man, if he follows along a line of progress which he assumes himself, and which is not bothered by his having another person take his place this year and another the next or he go back instead.

The assuming of the office is assuming a responsibility which every secretary who has held the office a few years realizes is a very large one, and yet it is full of opportunities. I have been well paid for my services as secretary by the thanks of the society of

which I have had the honor to be the secretary so long.

Dr. B. V. McClanahan, Galesburg: I think what appeals to me probably in this matter is the difference between youth and some one who is a little elderly in these matters.

I feel as though we have to have progress, and to have progress we have to have capable men, and that is the reason I think we need a change. I do not think any county secretary should hold his job until he dies. I think the same thing will appeal to you the same as it does to me. I would not want Dr. Doan to be misled by what I said about the change or long continued office; I think there are times when a county secretary is continued in office because he is willing to take it. A change would be a chance for each individual man in the society to get more of the responsibility of the working of the society itself, and for that reason I think it would be a good plan.

REMARKS

MATHER PFEIFFENBERGER, M. D.

President-elect, Illinois State Medical Society

ALTON, ILL.

I think the monthly meeting plan to be adopted throughout the state would bear fruit. The monthly meetings we have had in our own county with your efficient secretary, have been very productive of good. I think through his work our society has become one of the best in the state. I am not saying that in the manner of bragging, but we have our monthly meetings, we function officially and when Dr. Neal sends a communication to our society asking for action we all get busy to see our senators and representatives to secure results.

To show you the condition we were in last year, when the higher rate was proposed to take care of the per capita tax we very easily raised our rate to twelve dollars per year without a dissenting voice. Dr. Figenbaum is sergeant of the squad down there and has perfect control, and he is a good sergeant secretary.

It came to my mind while listening to the papers here that it might be a good thing to have a secretaries' conference about four times a year. I do not know whether that would be productive of good results or not but it seems to me it would. Then in connection with the county societies it might be a good scheme to institute a method of keeping abreast of the time. It might be a good scheme to have the members review journals and report to the county society meetings that month their observation of the things that came out that were new or unusual,

and in that way bring about a discussion in the family.

We do need some education in our ranks. As Dr. Haggard or Dr. Pusey intimated in a recent address to the American Medical Association, there is some arteriosclerosis in the medical profession in keeping abreast of the times; in other words, the medical profession has its problems of middle life disease. I think the only way we can keep abreast is by working in our county medical society. The secretary can give the late information before the society quicker than anybody else. When the Wassermann test first came out our secretary had it explained before the county society. In this way he keeps abreast of the new things that are coming up. When the scarlet fever antitoxin was developed, he immediately had someone present a paper on this subject. So the secretary is really the man who is responsible for his county society's keeping abreast of the times.

I think it would be a mighty good thing at this time for the secretaries to arrange to have an exhibit prepared by the American Medical Association for its annual meeting and then transported to every county society for its use. That exhibit could be gotten into shape so that it could be sent all over the state in this next year, and I am sure it would be productive of mighty good results.

I am very glad to have this opportunity to meet the secretaries and I hope we will have as good a year, as Dr. Krafft's has been. He has shown mighty good results and set a very good pace for his successor.

REMARKS*

J. C. KRAFFT, M.D.

President Illinois State Medical Society

CHICAGO

I have learned in the past year that the success of the society depends entirely on the whole-hearted co-operation of all component societies. We would be lost without the county society and its work, and the county society depends largely upon its secretary.

I disagree in this way with some of the remarks made previously. I believe it is a privilege to be a secretary of a county society. It gives a man an opportunity to carry on the

things that he thinks should be carried on, and the success that he is depends entirely upon his avenue of approach. If you will call in your committees and work with them, show them what you want to do, lay out your program, and conduct the office just as you would conduct your own business on a systematic basis, the things that you can do as a secretary are limitless. That way of doing business is one of the reasons for the success we had last year in the state society.

I am an optimist. I disagree when you say that the doctors are asleep; I disagree when you say we have more arterio-sclerosis than any other body. Perhaps we have less. Contrary to popular opinion, our longevity is greater than in most professions. I disagree also when we talk about the passing of the general practitioner. It is not true. Figures do not bear it out. I believe there is no class of men that will work so hard and so willingly as the men of the medical profession when they are shown how and why. Such has been my experience in twelve or thirteen years, and we have been told of medical activities for a long time back.

Legislation is more easily handled in Springfield now. Why is it easier? Because we have a man down there who is business and system all the way through. Go up to his office and he will show you, just like the figures on a chess board, exactly where you stand and where I stand—what you and I can do for the society. If you can be as exact in handling the business for your own society in your own county you can get anything you want. That is the policy which is making our state society such a successful society. We have been successful because we listened to the advice of all of them; we have gone not on the highways but down the side ways and byways and talked to the men and they are all enthusiastic. I am leaving office knowing we are just starting on the road to wonderful possibilities; that with the caliber of men following us we are going to be the greatest state society there is.

DISCUSSION

Dr. Edward H. Ochsner, Chicago: It has been a great privilege to sit here this morning and hear the gentlemen who are doing things for the Illinois State Medical Society give us their observations, give us an insight into what has been done recently and also to give us something of an outlook into the future. These men have done herculean work for the profession;

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few of the members who are not in direct contact with the work realize the amount of time and energy and thought that every one of these men who have spoken this morning has given for the general welfare of the profession.

The county secretary's job is, according to my way of thinking, the most important job in the Illinois State Medical Society and in many respects superficially considered the most thankless one. And yet I believe that the men who have been in this service for five, ten or fifteen years will tell you when they get through with the job that it has been the most worthwhile job they have ever done and the job that has given the most satisfaction. After all, it is doing a worth while job well that gives an individual the greatest satisfaction.

It is a great privilege to hear these men talk this morning, and the only pity is that instead of a hundred people hearing their remarks there haven't been six thousand. If every secretary in the State of Illinois would get right down to brass tacks we could accomplish much more even than has been accomplished. You take the question of the Sheppard-Towner bill that Dr. Whalen referred to—we happen to have in the important office of President of the United States a man today who thinks just exactly as we do on the subject of bureaucracy, on the subject of the central government taking control of everything down to your and my individual affairs. We have a great man there, and if every doctor in the United States would put his shoulder to the wheel today and support President Coolidge in his fight against bureaucracy we might surprise ourselves. His speech at Williamsburg was a wonderful speech, and I am not so hopeless. I believe if our secretaries would get busy on the Sheppard-Towner bill right here in Illinois and get the people of the State of Illinois stirred up perhaps something would happen yet to put that nefarious piece of legislation out of business.

ADDRESS*

J. N. JACKSON, M. D.,

President-elect of the American Medical Association

KANSAS CITY, MO.

It gives me great pleasure to have this privilege of visiting Illinois. I would like to say I am not coming here at the present time to read any lessons of instruction to the fellows of my profession because, after all, I am nothing but the president-elect, and it will take another year for me to get informed so I will be in position to give you information. In the meantime, I am trying to act as a sponge, trying to get the wisdom that comes from the men in the ranks and trying to find exactly where the men of this profession stand, because the American Medical

Association should be the representation of these feelings and not a dictator.

I feel a good deal of sympathy with these secretaries here. My first job in the medical profession was assistant secretary of the National Association of Railway Surgeons; my next job of any importance was the secretary of the Missouri State Medical Society and I therefore have the opportunity of realizing something of the problems that confront a secretary, and I am going to repeat that after all the keynote of the success of any society is the secretary. He is the live wire. I have seen some societies that have grown up and grown to be very large and influential societies through the efforts of the secretary. Take the Southern Medical Society, a society relatively in an isolated portion of territory, and they had a live wire secretary, and incidentally I want to say that live wire secretary had the most beautiful live wire assistant I ever saw, and they hired a woman to assist that secretary, and they finally grew up to what is second to the American Medical Association in extension and influence in America today.

The same thing is true in these county societies. There are men that accept offices who never expect to do anything except to say they have the job. Real geniuses as secretaries are rare birds. The problem is to find out in your county society the men who come nearest being the men who are willing to work unselfishly toward the future with no recompense except what he can do because it is idealism.

I remember the time when a man was supposed to be a surgeon of tremendous experience when he had seen twenty-five abdominal resections. Then something new was being sprung every day and a man did not dare miss a single meeting of his society for fear he might miss something he did not care to miss. There was a time, for instance, when this fertile soil where we stand today was nothing but wilderness, and the first pioneers incurred hardships. Everything was new, but it developed constantly, and the result was the stimulation of the pioneer. And so we have that period in medicine—the beginning of things when we first understood what came through the microscope—new fields opening up stimulating enthusiasm. It is not quite as exciting as it was in pioneer days; the opportunity is greater now for constructive work than it was in the olden days. Then, it was a

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period of development, exploration and men did not leave very much in accomplishment, although some did. We are arriving at that period today where we sort out of the material the false from the true; everything has been tried remedially, therapeutically and in research work and we are beginning to sift those down. It is not quite as exciting, but it is far more important. So we are beginning to discuss these things prayerfully, I might say, and carefully; we are sifting out the evidence of all the opportunities that have been before us, so while we have not the excitement today to buoy up a man you have the worth while needs.

I think if the most of our county societies could hold your meetings in the evening and have a dinner beforehand and bring your wives with you, make it a social affair, as well as business, you will have a more successful meeting.

THE DECOMPENSATING HEART IN CHILDHOOD*

ISAAC A. ABT, M. D.

CHICAGO

It is doubtful whether a special chapter can be written on decompensation of the heart in childhood. There are those who will say on first thought that cardiac decompensation of young life must be identical with the same process in adults, though it will be conceded by nearly everyone that the physiology and pathology of the circulation is modified at different periods of life by the processes of growth and development and by the susceptibility to different types of disease. Thus, cardio-renal-vascular disease is almost unknown in childhood, while rheumatic cardiac affections are most frequent in young life.

In childhood, cardiac disease is seldom associated with chronic kidney affections and rarely occurs secondarily to the pulmonary diseases which are a frequent cause of heart strain and disease of adult life. The excessive use of alcohol and tobacco, arterio-sclerosis, as well as disease of the coronary arteries are practically unknown factors in the production of cardiac diseases in childhood.

There are certain peculiarities in the cardiovascular conditions of childhood toward which the attention might be directed because consider-

ation of the physiologic differences in the circulation of infancy and childhood and adult life, may throw some light on cardiac pathology during the various age periods.

The lumen of the large vessels in the new born is relatively broad. Indeed the whole arterial bed seems wider than in later life due to the active growth of all the organs. However, the increase in the lumen of the arteries is less proportionally than the growth which takes place in the heart volume. From birth to puberty, the heart volume increases twelve fold while the aorta in the same period increases only three fold. It is an important point in the pathology of the circulation during the period of puberty, that the arteries become relatively narrow, and that the heart volume increases at this period. The lumen of the capillary system in young childhood is also broad and this seems to be associated with rapid growth in young individuals. Seitz has maintained that in childhood the capillaries of the lungs, skin and intestines are broader than in later life.

One frequently observes severe cardiac breaks during early adolescence in children who had compensated lesions up to this period.

Disturbances of the circulation result when the heart does not respond to the demands made upon it. Sometimes this failure of cardiac response occurs while the patient is at rest, or it may occur when he is engaged in active exercise, or when he is acutely ill with a febrile disorder, or during anesthesia. All cardiologists assume that the normal heart during its incessant period of work, possesses a large margin of safety; that is, it has a functional reserve. Disease of the heart itself or of other part of the body which interfere with normal circulatory processes, may tax the reserve strength of the heart to a varying degree. Indeed, the normal reserve may be nearly used up or exhausted; or the individual may use his entire heart power, including the reserve, to the maximum. A heart working at such speed is more likely to fail than one in which the circulation is carried on adequately, or with sufficient reserve.

If the reserve strength of the heart is diminished with the production of symptoms, one speaks of a relative insufficiency of the heart muscle. When the reserve force is exhausted to the extent that the heart power is insufficient to maintain normal circulatory conditions, abso-

*Address before the Chicago Medical Society, April 7, 1926.

lute heart muscle insufficiency may be said to exist. It is generally maintained and there is considerable clinical evidence to support the view that the child's heart has a great degree of reserve strength and an extraordinary power of adaptability. The heart of the infant and child, consequently, stands out well against cardiac insults and resists up to a certain point, cardiac failure in an acute infectious disease.

It need hardly be said that the outstanding etiologic factors in the production of chronic valvular disease are rheumatism and tonsillitis. The toxic effect of diphtheria on the myocardium is not an infrequent factor in the production of cardiac degeneration, weakening the muscle of the heart sufficiently to exhaust the reserve strength and produce decompensation. The most serious cardiac affection of childhood is chronic pericarditis, which in its acute stage may have been the manifestation of a pancarditis. In any event, the presence of adherent pericardium exerts an unfavorable influence on the heart. It causes hypertrophy and dilatation. Adhesions interfere with the normal growth of the organ and decompensation may occur gradually or in some instances in a very brief time.

Cardiac decompensation may be primarily cardiac such as occurs in an organ which has been crippled by pancarditis, or it may be circulatory in origin with secondary disturbance in the dynamics of the heart. In those cases where the heart muscle fails, the outstanding symptoms are due to passive congestion of the organs. Cyanosis and edema are the prominent symptoms. With heart muscle failure, the patients often complain of pain and pressure in the heart area as well as palpitation, though these symptoms may be absent. The pulse is usually diminished, small and weak, the blood pressure is low, the veins are dilated. The heart area is increased in its transverse diameter. As the left ventricle loses power, pulmonary congestion with irritative cough and dyspnea become more marked and eventually pulmonary edema occurs.

As the right ventricle fails, congestive symptoms of the liver and kidneys, associated with gastro-intestinal symptoms, manifest themselves. The appetite is lost, there is constipation or diarrhea, and due to the congestion, there may be epistaxis, purpura, hydrothorax and hydro-pericardium. These latter symptoms, similar to

the generalized cutaneous edema, occur most frequently in older children.

Before death cerebral manifestations occur, such as somnolence, apathy or convulsions. The heart's action may become slow as the result of cardiac insufficiency with heart block. All in all, heart muscle failure in childhood is characterized by swelling of the liver and dyspnea and is differentiated from the heart muscle failure in the adult by absence of relative tricuspid insufficiency, arrhythmia and cutaneous edema.

In addition to the heart failure or decompensation produced by the disease of the heart itself, grave cardio-vascular conditions may be produced by disturbances in the circulation, particularly during the acute infectious processes. The occurrence of this variety of circulatory disturbance is not sufficiently taken into account. In patients suffering from circulatory failure or collapse, marked pallor of the skin is observed. It is difficult to explain the cause of this pallor. It is not due to an actual anemia because it has been frequently shown that the hemoglobin and red blood count are not decreased. While it has been shown in animal experiments, that severe infections cause the vasomotor apparatus to lose normal control, nevertheless, it is difficult to understand how diminished inhibitory effect of these centers would produce anemia. The histological studies of Wiesel and Wiesner showed that in a number of infectious diseases, pathological changes occur in the muscular coats of the arteries, possibly in some instances leading to their contraction. It is apparent that the explanation of the pallor is unsolved, though its existence is undoubted.

The classical experiments of Romberg and his pupils have shown that collapse in the course of infectious diseases is not primarily cardiac but of vascular origin. They think that a paralysis of the vasomotor center plays the important part. In some of the cases, however, a primary constriction of the blood vessels of the liver occurs which in the case of infectious diseases is caused by the effect of retrograde metabolic products. A fall in blood pressure results.

Circulatory failure in the infectious diseases may be explained primarily by paralysis of the vasomotor centers and it is doubtful if the heart participates at the onset. Romberg observed that in pneumococcus infections the heart does more work during the period of the infection than un-

der normal conditions, and that although there may be some vascular paralysis and a threatened collapse, nevertheless the heart remains compensated for a time.

This is true not only in pneumococcus infections but also in gripe and diphtheria. These investigations also show that collapse occurring during an infection does not depend upon direct damage to the heart, but is the result of vessel paralysis. In the circulatory type of heart failure which we have just alluded to, the striking symptoms beside pallor, are labored breathing and weakened heart action; the pulse is weak and easily compressible, and rapid. There is modified mental state, loss of power of voluntary and involuntary muscles, and diminution of secretion of urine.

The face is usually blanched, though sometimes the superficial veins contain a considerable amount of blood. The patient has an anxious appearance, and when coma or unconsciousness has occurred the face may be expressionless or mask-like. It is frequently shrunken and pinched; the chin droops; the nose is pointed and the tip is cold; in extreme cases the eyes have lost their luster. The patient, as a rule, is extremely weak; the eyes are rolled upward; the lips are pale or cyanotic. The skin is pale gray and appears bloodless. A cold perspiration occurs on the surface of the body. Respirations, as a rule, are rapid and frequently sighing. Breathing is labored and the Cheyne-Stokes variety may occur.

The muscles are relaxed. In extreme cases the patient maintains the position in which he is put. Very often voluntary muscular power is lost. The function of digestion is diminished and vomiting and relaxation of the sphincter of the bowel sometimes occur. The patient may be unconscious, though delirium may be present, with considerable mental excitation and continuous rambling speech. Frequently he is confused mentally, talks irrationally and incoherently.

TREATMENT

True Cardiac or Congestive Type.—When the heart muscle is capable of meeting the demands made upon it at rest, but shows signs of failure or fatigue when subjected to strain or effort, we may consider that there is a partial insufficiency especially if dyspnea and palpitation follow exercise. In these children activities should be re-

stricted and long periods of rest prescribed. Tonics may be of value. The diet should be moderately restricted and fluids should not be given in excess.

Where congestive symptoms have already manifested themselves, the use of digitalis is indicated. The general rules governing the use of digitalis will naturally be applied. Digitalis should not be used in cases where a congenital malformation of the heart exists, nor should it be used even in small doses in the treatment of any diseases where there are no symptoms of heart muscle insufficiency. It has been suggested that calcium chloride be given in combination with digitalis. It is thought that the calcium exerts a synergistic action, increasing the effect of the digitalis and causing it to act more quickly. In some cases, it may be advisable to digitalize the patient by giving maximal doses for three or four days. When its effect has been produced it should be discontinued.

Circulatory Failure.—Patients who show circulatory failure should be placed in bed as soon as possible. External heat should be applied by the use of hot blankets or hot water bottles. Hot drinks should be given if the patient is not nauseated or vomiting. In the case of infants weak tea may be administered.

The cardiac stimulants are time honored remedies, although opinion at the present time is not unanimous as to the value of these drugs in circulatory failure.

The injection of camphor in the form of camphor oil has been and still is in general use. Pharmacologic experiments show that the results obtained are not constant.

Epinephrin is fugitive in its action and does not produce a sustained effect on the circulation. When given hypodermically it raises the blood pressure. It also acts upon the heart first by accelerating, and then slowing it. The latter occurs when the blood pressure is raised as a result of vagal stimulation. Epinephrin is therefore indicated when there is evidence of an acute circulatory collapse with rapid pulse and falling blood pressure. The drug may be given intravenously and may be considered of special value in the infectious diseases, particularly pneumonia. On account of its transitory effects it should be repeated at short intervals.

The action of pituitary extract is similar to that of epinephrin, the difference being a matter

of intensity. Pituitrin acts less rapidly, but its effect is said to be more prolonged.

It has been shown that caffein may cause an increase in the total blood flow without a corresponding rise in pulse rate. It raises the blood pressure, slows and steadies the heart. There is every evidence to believe that caffein is a useful remedy in the treatment of circulatory failure.

There is no universal agreement as to the value of digitalis in the treatment of circulatory failure during acute febrile conditions, though recent electrocardiographic studies show that digitalis exerts the same effect on the heart in febrile conditions that it does in the non-febrile state.

If during the course of an infectious disease the pulse becomes small and soft and the extremities cold and blue, the indication is to aid the circulatory organs. Digitalis is usually selected for this purpose. The use of digitalis in pneumonia has not been found beneficial in most instances. On the other hand, if the heart is defective in one way or another before the onset of pneumonia, digitalis may be indicated.

There is no basis for giving digitalis in every case of pneumonia. We are not surprised to find that digitalis has no effect in the acute infectious diseases because we have learned from Romberg and his students that the collapse in these conditions is not due to a cardiac insufficiency, but is caused by a paralysis of the smaller vessels. It is for this reason that the drugs which act upon the vasomotor center are more useful—caffein, adrenalin, pituitrin and atropin.

There are still some who believe that digitalis is effective in the circulatory failure of typhoid, and the drug continues to be used in the acute infectious diseases, after hemorrhages, prolonged anesthesia, and in collapse in general. One should not expect much from the use of digitalis in these cases, and the vasomotor stimulants are more definitely indicated.

The favorable effect of the external application of mustard in circulatory failure of infants and young children has long been recognized. This is a valuable therapeutic measure for the heart failure which occurs in pneumonia and nutritional disturbances, or in any condition in which heart failure is threatening or impending.

Rest and sleep are important factors in the treatment. Excessive manipulation should be avoided. Operative interference should be de-

ferred and excessive treatment should be dispensed with.

The surroundings should be kept quiet. Anxious friends should be enjoined from disturbing the rest and quiet of the patient. Sleep should be induced. Sometimes a moderate dose of paregoric in infants or an appropriate dose of codein or morphin in an older child will do more to relieve circulatory failure than all other medication which may be employed. Indeed, it may be a life-saving measure.

ARTIFICIAL PNEUMOTHORAX IN PULMONARY TUBERCULOSIS*

P. S. WINNER, M. D.

Medical Superintendent, Municipal Tuberculosis Sanitarium
CHICAGO

The only surgical methods which have to any satisfactory extent come up to our expectations in the treatment of pulmonary tuberculosis are those included in the term "collapse therapy." The term "enstpannung," of German origin, covers the idea of compression and immobilization. Collapse treatment involves ideas and principles that are in line with the ordinary ways of nature's healing process, and is at the same time in harmony with the physiological peculiarities of the organs in question.

Collapse may be produced either by artificial pneumothorax or, if this is unsuccessful, due to extensive adhesions, by thoracoplasty. I shall take up the subject of artificial pneumothorax only as the subject is quite important in itself. The main reason for bringing up this subject is to acquaint the general practitioner with its possibilities and give the results I obtained in a large series of cases under treatment at the Municipal Tuberculosis Sanitarium.

Artificial pneumothorax has been generally regarded as a standard measure of treatment since the International Congress for Tuberculosis held in Rome in 1912. Compared to other methods of treatment, pneumothorax in suitable cases must be considered as one of the best curative measures we have at the present time in pulmonary tuberculosis.

Functional rest is a very important factor in the treatment of tuberculosis. The lung is one of the organs of the body that never rests. The introduction of a sterile material in the pleural

*Read before the Chicago Medical Society, January 13, 1926.

cavity will inhibit the function of the lung by collapse, thus giving the lung an opportunity to heal.

The treatment of unilateral pulmonary disease with collapse of the lung achieved by artificially closed aseptic pneumothorax belongs to the therapeutic measures which we have learned from nature. It has been known for a long time that a pleuritic effusions can have a favorable effect on a lung diseased by pulmonary tuber-

thorax treatments in 1898 and reported a number of cases.

The introduction of air into the pleural cavity will inhibit by collapse the function of the diseased lung. By compression the lymph flow is checked through the diseased lung; it further empties the lung of accumulated products of degeneration and, by flattening the lumina of the bronchi and alveoli, prevents the spread of infection by the bronchial tree route. This com-

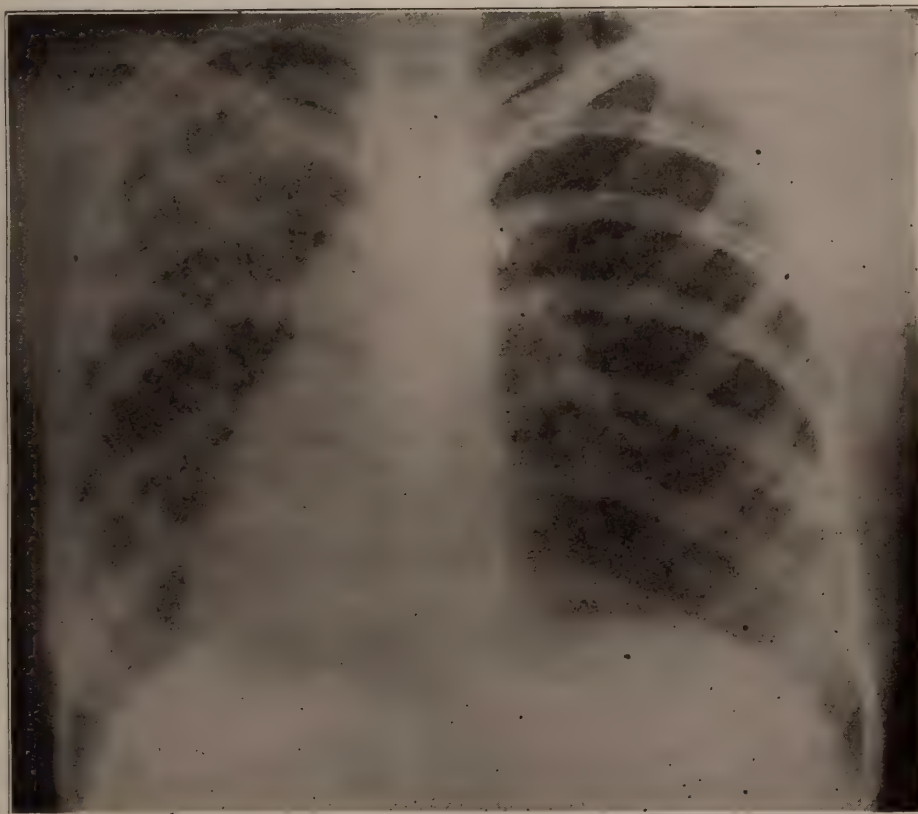


Fig. 1

Plate taken on admission of patient. Cavitation left apex. High temperature. Marked cough and very toxic.

culosis. Similarly beneficial influence on the lung condition was observed in cases of spontaneous pneumothorax after the patient had overcome the first shock with its acute symptoms. This experience formed the foundation of the treatment of pulmonary tuberculosis with artificial pneumothorax. I shall not go into detail as to the early history of the development of artificial pneumothorax. Carson suggested it as early as 1821 and it was revived again in 1888 by Forlanini. Independently of these experiments, J. B. Murphy in Chicago gave pneumo-

plete rest is directly responsible for the growth of the fibrous tissue which encapsulates the lesions and eliminates the disease. Saugman has mentioned the compressed lung as being emptied of its waste products "like a pressed sponge."

In the opinion of various observers, following are the pathological and physiological fundamentals of the collapse therapy:

1. Collapse favors the tendency of the diseased lung to shrink and narrows cavities which could not heal without the removal of the tension of the lung tissue.

2. Collapse therapy creates physiological changes and uses the new condition of the collapsed and resting lung for the stimulation of the healing process.

3. It achieves the reduction of the volume of diseased region and relaxation and removal of the tension of the lung and stops the respiratory movement.

The reduction of the volume is increased by the extent of the pneumothorax—the more extensive the pneumothorax the more efficient the collapse.

A compressed lung shows a fleshy mass full of connective tissue; some of the blood vessels may be thrombosed. The tubercles are dry and are seen to be firmly encapsulated by fibrous tissue. New tubercles are seldom found. The factors responsible for the growth of fibrous tissue in a compressed lung are stimulation by toxins in the stagnant lymph, chronic hyperemia and inhibition of function in the lung. The uncompressed lung is found to compensate by becoming large with emphysema and hyperplasia. By the slowing up of the lymph circulation, the absorption of toxins from the lesions into the general circulation is impeded or arrested. In pneumothorax the clinical phenomena of phthisis, such as fever, night sweats and weakness are prevented and the body is thus given an opportunity to recuperate. Because the lymph stream is unable to carry away bacilli from the lesion, the process is localized to the affected area.

Types of Cases Suitable for Treatment—Matson in a discussion on the advisability of pneumothorax treatment states that few patients with pulmonary tuberculosis disease to the extent of demanding pneumothorax are wholly free from invasion in the opposite lung. In our cases, out of a total of 96, 42 showed evidence of disease in the opposite lung demonstrable by the x-ray. Forlanini, when he first described his technique on pneumothorax, insisted that the treatment be used only in far advanced cases after everything else had been tried and that the lesion must be strictly unilateral. While pneumothorax may be indicated in the fibroid unilateral case running an extremely chronic course, it seldom can be given, due to extensive pleural adhesions which are usually found in such cases.

Artificial pneumothorax finds its best indications in the progressive and acute type of the

disease where infiltration, caseation and cavitation occur. The results are often striking in such cases, although the ultimate results are always better in the chronic type, if we can succeed in inducing a good collapse. The reason for this is apparent. In the chronic case the resisting power is generally good, while in the acute cases the benefit gained from compression of the lung does not offset the low resistance. In uncontrollable hemoptysis, pneumothorax is found very useful. By compression of the lung we are able to control the hemorrhage and to give the tuberculous focus an opportunity to heal.

While admitting the best results are obtained in unilateral lesions, yet in the apparently hopeless, far advanced case, where the active lesion is more pronounced on one side, pneumothorax is indicated and should be attempted. Forlanini, Brauer, Spengler and others have argued that all advanced cases should be given an opportunity to benefit by artificial pneumothorax. At times we may be astonished by the cure of even such patients. The removal of toxic material gives the patient an opportunity to muster his natural forces of resistance.

While hemoptysis is not often fatal, I have occasionally seen cases terminate by hemorrhage. When the usual treatments do not give the desired results, artificial pneumothorax should be induced. In cases where a definite diagnosis as to the site of bleeding was impossible, I have noted decidedly beneficial results even when the pressure was exerted on the opposite lung from the one in which the bleeding occurred. In our series of 96 cases, twelve were hemoptysis treated with pneumothorax and in all except one, the collapse succeeded in stopping the hemorrhage. Four of these cases have become arrested and have been discharged from the Sanitarium. It is well known that the untreated lung becomes affected only in exceptional cases. In spite of the increased work required of the untreated lung, the active lesions in that lung are often improved. In only a small percentage of cases do the lesions flare up in the untreated lung. I have noted one such case recently.

N. Betcher has come to the conclusion that a pneumothorax on one side exerts the same influence, to a lesser degree, on the healthier lung, since the tension in that lung is also relaxed. This theory is based on measurements of the

intrapleural space on both sides of the body of a woman of 30 who had been dead for 20 hours. The lungs were healthy, but the left pleural space contained a small pleural effusion. This effusion was replaced by air through a hollow needle. A needle was introduced into the right pleural cavity and both needles were connected with manometers. As air was introduced or withdrawn from the left pleural cavity, the pressure of the right pleural cavity rose or fell.

incipient cases will recover from their disease by a few month's sanitarium treatment. If, however, the disease is progressive, no time should be lost in waiting for something to happen; many lives could no doubt be saved by the judicious and timely use of pneumothorax. Although authors on the treatment have elaborately defined the absolute and the doubtful indications for the treatment, it still often happens that cases apparently most suitable do badly, while cases in

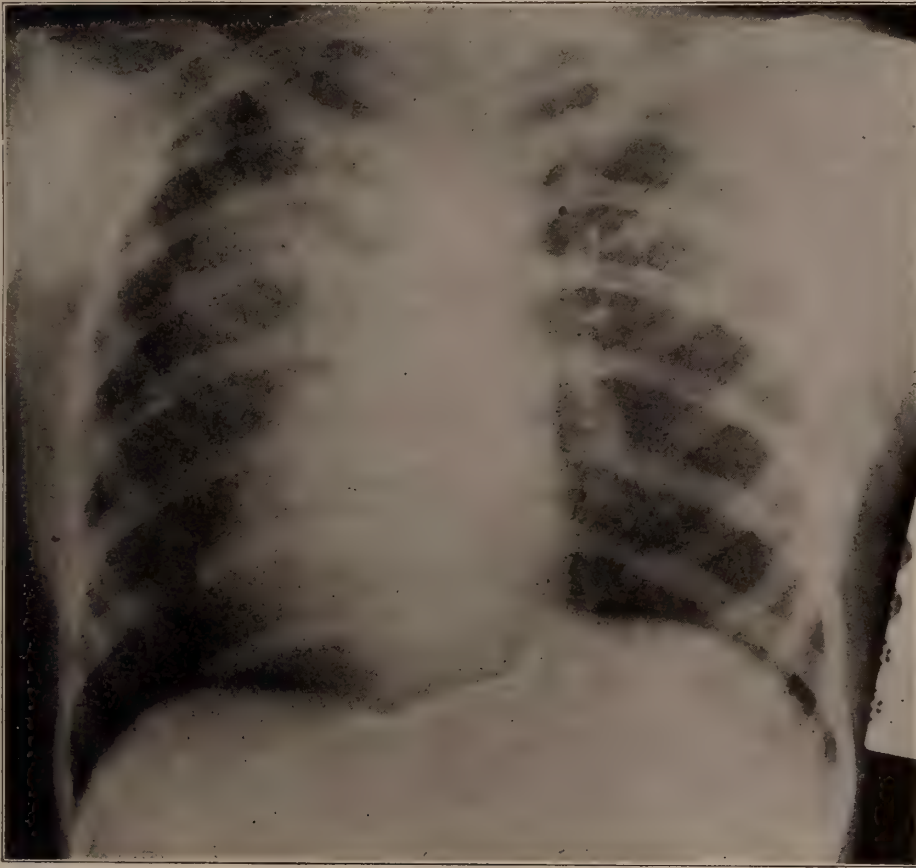


Fig. 2

Same case as Plate I. Beginning of pneumothorax treatment. In this case small amounts of gas were given. Improvement in general condition is marked. The compression is almost complete.

Betcher maintains that gas introduced into one pleural cavity relieves the tension of both lungs and that, strictly speaking, there is no such thing as unilateral collapse therapy. This inclusion of the healthier lung in the sphere of influence of the artificial pneumothorax is due to displacement of the mediastinum.

Various observers believe that even incipient cases should be treated by pneumothorax. I do not agree with this opinion. Many of the in-

which the treatment seems hardly justifiable do extraordinarily well.

Summarizing, I might say that artificial pneumothorax is indicated:

1. In early cases which do not respond to the ordinary rest and hygienic treatment.
2. In advanced unilateral cases.
3. In old fibrotic unilateral advanced cases which are semi-invalids.
4. Cases of pleural effusion if there is evi-

dence of active tuberculosis in the lung on the same side.

5. In recurring chronic pleural effusion.
6. In cavities.
7. In tuberculosis of young adults when the disease recurs after arrest.
8. In uncontrollable hemorrhage.

Contraindications—1. Active disease in both lungs.

2. Early tuberculosis which is becoming arrested by treatment on ordinary lines.

3. Extensive tuberculosis disease elsewhere.

The Apparatus—Each apparatus consists of two graduated bottles connected by tubing, one of which contains air and the other fluid. When the fluid flows into the empty bottle it displaces the air which is pressed into the pleural cavity through a rubber tube and the needle. The manometer indicates the intrapleural pressure and has rightfully been called the "Heart of the Apparatus." As soon as the needle enters the free pleural cavity, a negative pressure will be registered due to the vacuum in the pleural space. With inspiration and expiration the manometer will register the changes of the air pressure in the pleural space. With the aid of the manometer one can tell whether one is in the pleural cavity and whether the adhesions are extensive or not.

If in going through the pleura the manometer does not register, one of several things may have occurred. Either the needle is not entirely through the chest wall or it may have gone through the visceral pleura into the lung. Adhesions or the presence of fluid in the chest wall will also interfere with the free fluctuation of the manometer.

The use of nitrogen gas has been discarded and atmospheric air is now used, as it was found that there is rapid diffusion of the two gases—nitrogen and oxygen.

The Operation—Pneumothorax should be considered as a surgical procedure and strict asepsis is necessary. The site selected for injection is swabbed with iodine and alcohol. Sterile towels, thorough scrubbing of the surgeon's hands and the use of rubber gloves must be insisted on. A novocaine or butyn solution of one-half per cent. is used as a local anesthetic. Pneumothorax treatments may be given in the patient's home or at the physician's office. When possible, the

axillary line in the sixth or seventh interspace is selected, because the chances of entering are better. Fishberg has aptly said that it is very difficult and often impossible to avoid pleural adhesions even with all the means of diagnosis which at present are at our command. Patients generally dread the first treatment but not the refills.

My practice has been to give small amounts of gas, 200 to 350 c.c. depending, of course, upon the presence of a free pleural space. These treatments are frequently repeated. I always finish the treatment with a negative pressure. The only exception is in the case of pleural adhesions, when high pressures are at times indicated and an attempt to break up these adhesions is made.

The best results are usually obtained when the intrapleural pressure is maintained at minus 3 or 4 cm. Stivelman gives the following principles:

1. To avoid sudden change in the intrathoracic equilibrium and in the relative position of the intrathoracic viscera.
2. To avoid high pressure in the presence of a flexible mediastinum.
3. Gradually but definitely to increase positive intrapleural pressure in cases in which pleural obliteration is threatening.
4. Determine in each individual case the pressure required.

Adhesions are the cause of many failures to attain a good compression of the diseased lung. A collapse must be complete in order to give the most beneficial results, although many patients will do well with only a partial collapse. In one of my recent cases only a partial collapse was possible. However, the patient is doing very well. She has gained 25 pounds in weight, her temperature and pulse are normal, the sputum has become negative and the troublesome cough has entirely subsided. Attempts to separate adhesions have been undertaken by Jacobeaes who described the method of "endopleural operation." By the use of the thorascopy apparatus (an instrument to visualize the pleural adhesions) it is relatively easy to see the existing adhesions and their attachment to the lung and to the chest wall. Jacobeaes has succeeded, by means of a platinum wire attached to the end of a long metal rod inserted into the pneumothorax cavity through a separate cannula, in cut-

ting some of these bands. It is possible in certain cases to cauterize the adhesions and thus secure a complete collapse of the lung. This is especially of value in those limited pneumothorax cases which have strong or membrane-like adhesions. Apical adhesions, which keep the lung tied up, are usually hard to reach. On the other hand, lateral adhesions can be dealt with easily when they have been extended to the highest degree of pneumothorax. It is not advisable to

Clinical observations seem to favor the latter procedure. Among the advantages of the low pressure installations are no displacement of the mediastinum or heart; and effusions are not as likely to occur.

Refills—Frequency and Amounts—After the initial pneumothorax installation, the next few treatments should be given every third or fourth day, going into the same space as before. The amounts of gas given to refills should not be large,



Fig. 3

Successful pneumothorax. Showing complete compression of left lung. Heart not displaced. No evidence of fluid. Temperature and pulse normal. Cough entirely subsided. Same patient as in Plates I and II.

attempt the cauterization of surface adhesions as the lung tissue may be injured, with the possibility of hemorrhage and the opening of the tuberculous foci and cavities and consequent infection of the pleura. Jacobeauss himself has used this method in approximately 90 cases.

If the pleural space is found to be free and air is allowed to flow, the manometer should be consulted at each 50 c.c. of air given. As stated above, a small initial dose should be given. J. B. Murphy advised the giving of large doses—3000 c.c. while Forlanini gave 200 to 300 c.c.

depending, of course, on the intrapleural pressure. After the complete collapse of the lung the frequency of refillings should be diminished. Success or failure depends very largely on the correct spacing of the intervals between refills and on maintaining the correct degree of collapse. The best results can be obtained when each patient is considered individually and the treatment is made to fit the patient and the patient the treatment.

It has been my practice to give the first four or five refills of 250 to 350 c.c. every third or

fourth day. Manometer, fluoroscopic and physical findings should be one's guide. High air pressure should be avoided as far as possible.

Symptoms—Immediately upon completion of the operation the patient feels a slight difficulty in breathing, although this is negligible and often is not noted. When the gas separates adhesions slight pain is experienced. When the compression is good the temperature drops to

ing spells and stop the dreaded night sweats. There is no doubt that it is an immediate life saver and often a life prolonger. Barlow has demonstrated that the good results of pneumothorax are not due to compression, as shown by the fact that tubercles develop without difficulty in airless organs, such as bones. Artificial pneumothorax aids in the formation of fibrosis only in so far as it brings about complete rest of the

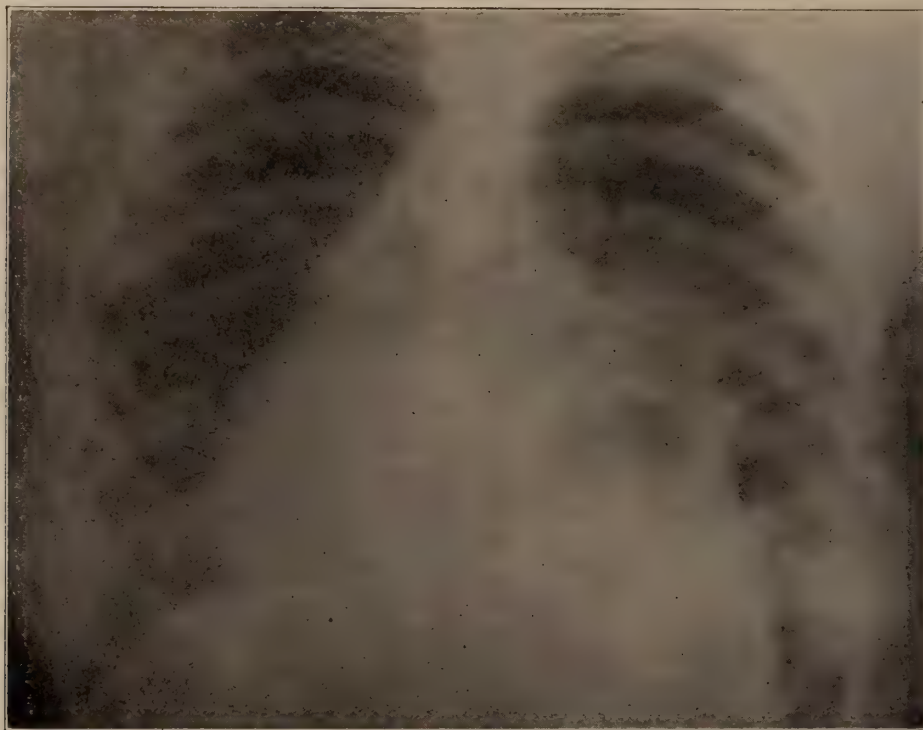


Fig. 4

Unusual type of collapse. (Right side.) The upper part of lung is collapsed while the lower part is held by adhesions. Evidence of cavitation near adhesions. In this case a phrenicotomy was done. This brought the diaphragm up and aided in collapsing the cavity.

normal and remains there unless some complication sets in. When the temperature remains high after several pneumothorax installations, it means the treatment in this particular case will be a failure. Rapid improvement in the cough is noted especially when a large cavity has been successfully compressed. While it is true that the best results are obtained by complete compression, partial collapse produces good results at times. Partial compression very often causes a disappearance of toxic symptoms, such as night sweats, cough and high temperature. The immediate results of pneumothorax are often almost miraculous. It will stop a bleeding lung, bring down a high fever, relieve the severe cough-

diseased tissue in which there is already a tendency towards fibrotic change.

If partial collapse of an entire lobe is effected, with each breath there is slightly less expansion of the tuberculous portion, and authors claim that after a few hours or days the diseased part will be seen to have appropriated to itself the greater part of the collapse of the entire lobe, the healthy portions expanding nearly or quite as well as before. In this manner we can readily explain the subsiding of toxic symptoms even when only a partial collapse has been accomplished.

If excessive intrapleural pressure is allowed, dyspnea will likely be troublesome. In a suc-

cessful pneumothorax there will be a gradual increase in weight and a return of the appetite to normal. If improvement fails to follow the induction of pneumothorax and the patient continues to run a high temperature, even though there may be improvement in the cough and expectoration, one should keep in mind the possibility of a shifting mediastinum, or displacement pneumothorax and abandon the treatment

rest. A human being can live on much less than two-fifths of the normal breathing area in the lungs. Life may continue even when the greater part of the lung is destroyed.

J. R. Means and G. M. Balboni found that while the patient keeps at rest, respiration, gaseous exchange, carbon dioxide tension and the mechanical factors remain normal; thus patients with pneumothorax are dyspneic only on exer-

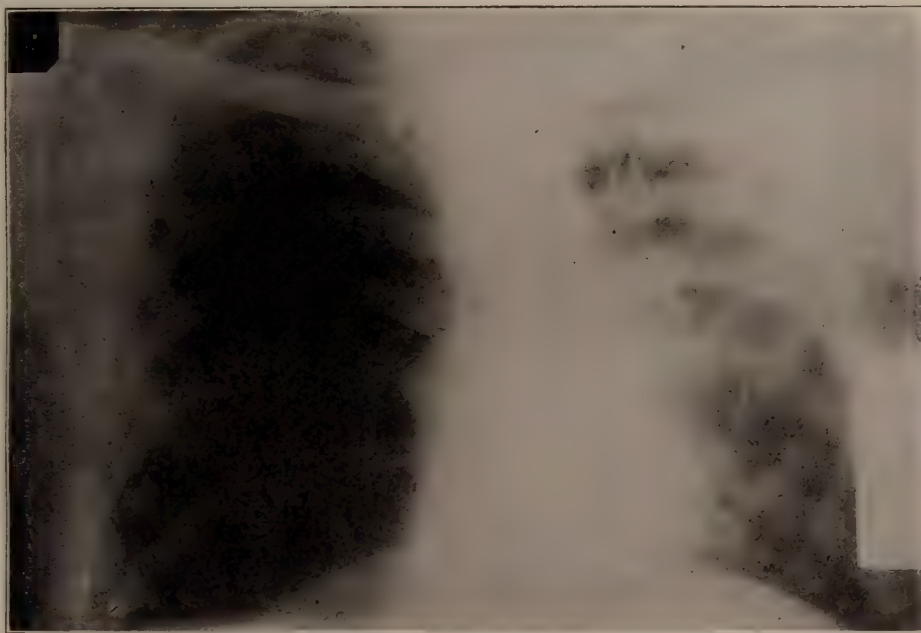


Fig. 5

High pressure pneumothorax. The heart is displaced into the right chest. No lung markings on left side visible. Patient dyspneic and it was found necessary to take several hundred cubic centimeters of air from collapsed chest in order to give him relief.

which has failed because of unfavorable conditions.

The most striking effect of pneumothorax in cases of hemoptysis besides the general improvement is the immediate cessation of bleeding, even after the first installation, and while the patient is in constant dread of a recurrence. If a collapse is successful, the hemoptysis stops at once. The air inflated acts like a tampon. In cases, however, where the adhesions are extensive, collapse is impossible and the more severe procedure of thoracoplasty must be resorted to in order to save the patient's life.

Rest is very important during treatment by pneumothorax. Results at times are unfavorable even in patients who respond well to artificial pneumothorax. The patient feels so well that he becomes careless and will not take the required

tion. The ventilation of the blood is accomplished almost normally despite the fact that one lung is not being used.

In cases of adhesions of the lower lobe, phrenicotomy may be of considerable value in combination with artificial pneumothorax. It has been found that refills are less frequently necessary in cases of phrenicotomy.

Complications—Not all cases of artificial pneumothorax go through their period of treatment without complications. Symptoms may arise either during or after the operation. Pleural shock and air embolism may occur during the operation, but these complications are comparatively rare. In more than 2,000 inflations which I have given, I have seen but one case of air embolism; the symptoms were transitory in nature. Matson states that in 12,000 inflations

only four cases presented the symptom complex of gas embolism and pleural shock; two of these proved fatal. Pleural shock may be very mild or very severe in character. The cause is rather indefinite, although Saugman is inclined to attribute it to reflex spasm. Gas embolism on the other hand, is caused by air introduced into the circulation because of the entrance of the needle into one of the veins around an infiltrated area of lung tissue, or adhesions of the pleura. Air

carried out. The use of cardiac stimulants and oxygen inhalation are of the utmost importance.

Exudate develops in a great many artificial pneumothorax cases. The presence of exudate facilitates the development of empyema. Many factors account for the formation of the exudate following pneumothorax treatment, such as loss of sodium calcium balance of the body. N. Lunde has found that following the administration of calcium in the form of calcium chloride 30, potas-

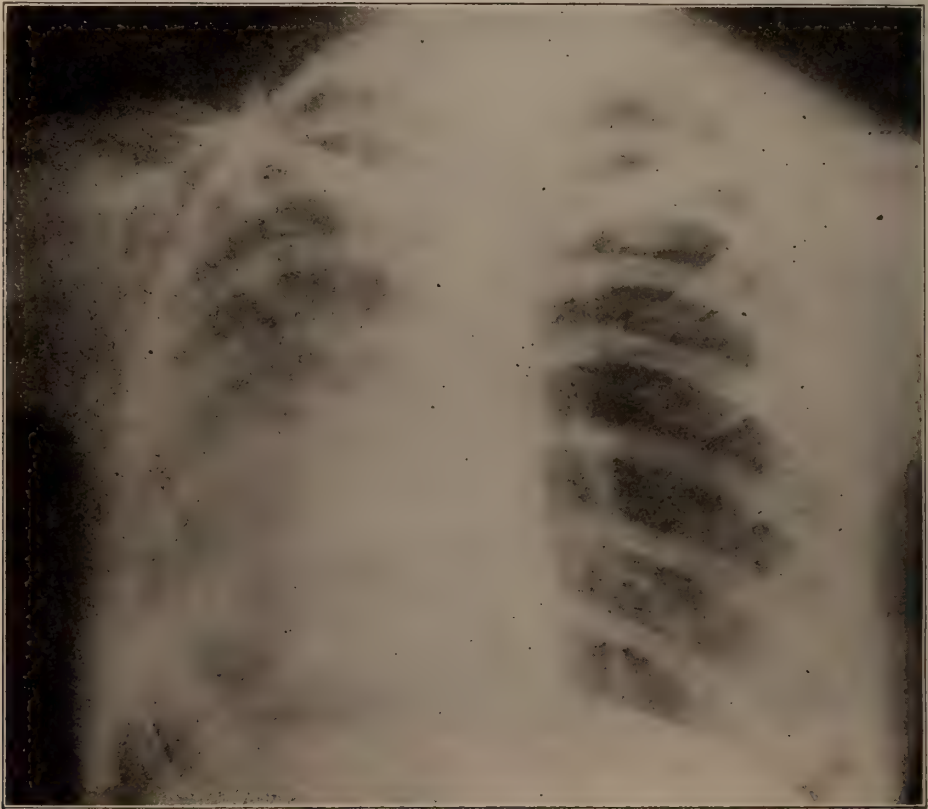


Fig. 6

Unilateral case. Left sided lesion with cavitation. High temperature and severe coughing present. Positive sputum. Very toxic.

embolism may be encountered either in the first operation or in refills. In the case cited above the complication of air embolism occurred during the fourth treatment. The symptoms of shock—cold clammy skin, imperceptible pulse, involuntary movement of the bladder and bowels, with aphasia were noted. The symptoms gradually subsided but for several weeks a slight speech defect, even perceptible to the patient herself, and slight paresis of the right side were noted; both disappeared entirely. When symptoms of collapse occur during a pneumothorax inflation, treatment must be promptly and energetically

carried out. The use of cardiac stimulants and oxygen inhalation are of the utmost importance. Exudate develops in a great many artificial pneumothorax cases. The presence of exudate facilitates the development of empyema. Many factors account for the formation of the exudate following pneumothorax treatment, such as loss of sodium calcium balance of the body. N. Lunde has found that following the administration of calcium in the form of calcium chloride 30, potas-

sium acetate 60, and water 285—a teaspoonful several times daily—and as an adjunct, cod liver oil to increase the vitamins, he has noted fewer cases of exudate and the exudates that did occur would take a more favorable course. Pleural effusion is a very common and rather serious complication which occurs often during pneumothorax treatment. Percentages vary from 10 to 70. Matson reports that in 83 out of 480 compression cases a serous exudate developed in amounts of 50 c.c. or more. Burrell states that pleural effusions form in nearly half of the cases. Erma Newer noted that in only three

out of 62 cases pleural effusion did not occur. In our series of cases 28 per cent. showed evidence of fluid during their pneumothorax treatment.

The fluid in the pleura may be very small in amount and difficult of diagnosis, or it may be large in amount and refill after each tapping. If small in amount it is generally transitory in

thors maintain that effusion may have a very beneficial effect on the patient, first, by maintaining a good collapse and, second, by the production of antibodies. I am inclined to believe that pleural effusions are rather detrimental and that patients do better who do not develop this complication. It has been my practice in cases with pleural effusions to aspirate the fluid and

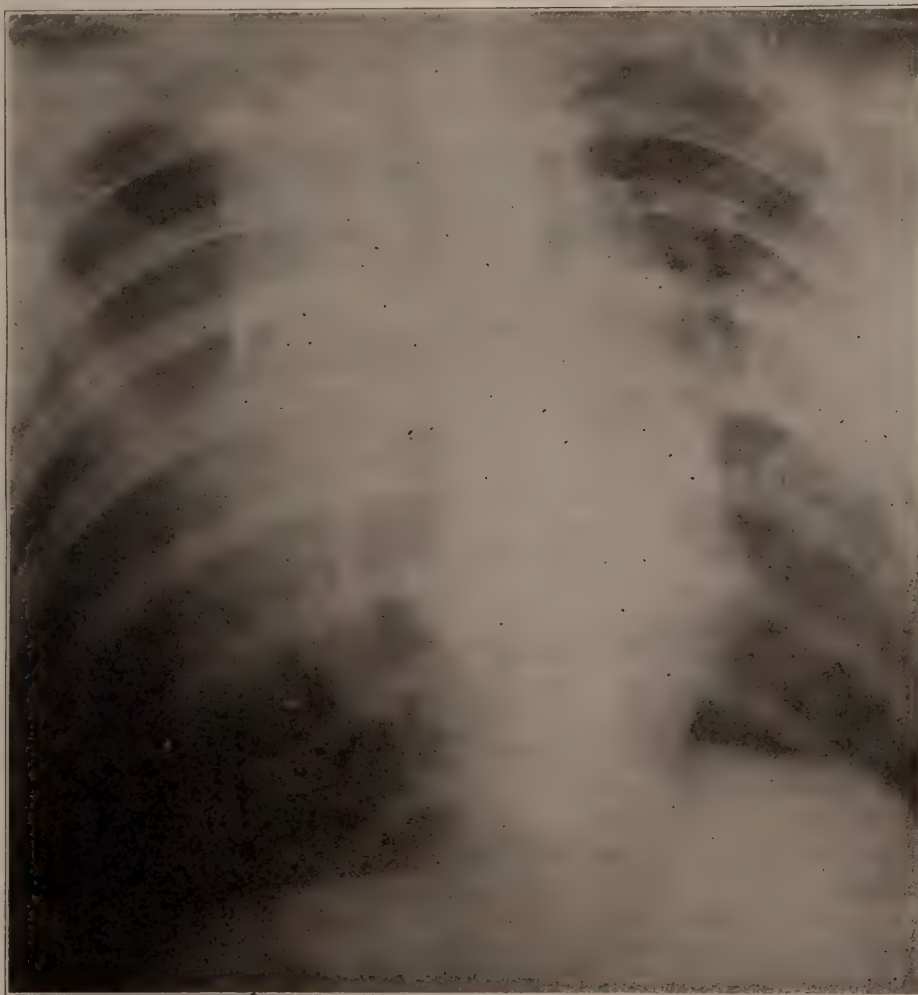


Fig. 7

Same case as Plate VI. Before appearance of fluid. Patient suddenly developed a high temperature during pneumothorax treatment. Pleural effusion was suspected but not found by x-ray.

character, lasting only from four to seven days without producing any untoward symptoms. A sudden elevation of temperature in a patient doing well under pneumothorax treatment often means the appearance of fluid. The temperature will gradually drop. The fluid will be found to be clear on aspiration but will become cloudy or pusy if a mixed infection sets in. Some au-

replace it by air as advocated by Stivelman. This will prevent the formation of adhesions in many cases, although Fishberg believes that when adhesions begin to form they cannot be prevented by any known means.

The treatment of this condition depends entirely upon the symptoms found in each case. If there is absence of fever or dyspnea, a "hands

off" policy will produce the best results. It can readily be seen that mixed infections will invariably occur by frequent aspirations. However, when there is rapid accumulation of fluid, causing cardiac or respiratory embarrassment, the indications call for aspiration and replacing with air. The manometer should be one's guide as to how much air one is to replace. The pressure certainly ought to be around zero, in order to maintain an even intrapleural pressure. In one of my cases an average of 500 to 600 c.c. of fluid was aspirated weekly for several months with a rapid reaccumulation of the fluid. I have carried out the suggestion of injecting 10 c.c. of the fluid subcutaneously, but I have not noted any beneficial effects, nor do I believe that reabsorption is hastened by this method.

Pyothorax complicating artificial pneumothorax is very grave, and unfortunately occurs in a fair percentage of cases. Matson found 59 cases of tuberculous empyema in 480 cases of pneumothorax. In his opinion, empyema usually arises from tearing a portion of the lung cortex in the effort to separate adhesions, from ulceration of the superficial caseous focus into the pneumothorax cavity. With the formation of an empyema, the fever and emaciation go hand in hand. I have had several cases with pus in the chest cavity show no toxic symptoms and remain in good physical condition. This, however, is the exception and not the rule. The empyema must be aspirated in the presence of toxic symptoms, although the danger of formation of a fistulous tract is great. I have now two such cases. One was treated by the "closed" method of drainage, that is, an "air tight" tube and frequent irrigation with the Carrol-Dakin solution. In the second case only a fair sized aspirating needle was used and irrigation was done with a 2 per cent. solution of formalin and glycerine. Both cases developed fistulous tracts. Tube drainage is a measure to be used only as a last resort. In some instances the pus finds its way out through a bronchus and the patient drains it out, spitting large quantities of purulent material for months. This condition is rare. I have not observed any such case among our patients.

The possibility of the disease becoming active on the other side should always be kept in mind. Fortunately it does not occur very often. In

Matson's series of 480 cases, 282 of the patients had demonstrable disease in the opposite lung; yet progression of the disease took place in only 35 cases during the actual period of pneumothorax treatment. Five cases in our series fall in the same category, that is, activity developed on the untreated side. In two of these cases I have attempted bilateral pneumothorax; one ended fatally and the second is making very little progress towards recovery.

At times it may become necessary to introduce pneumothorax even in the presence of disease in the opposite lung. If the disease in the better lung is not too active, it is advisable to put in a thin layer of gas in the more diseased lung. In this manner the formation of adhesions will be prevented and the effect on the opposite lung can be noted. This suggestion was made by Matson, but it is similar to the low pressure collapse as described by Barlow. It is true that beneficial results have been noted in these cases, even in the presence of active disease on the other side, but I am inclined to question their permanency. I am now doing a partial compression on a patient in the presence of active disease on the opposite side and the improvement is very marked. The rales on the better side have almost subsided and there has been an appreciable gain in weight and a lessening of the toxic symptoms. This patient is on limited exercise now and the laryngitis which was also present has about disappeared. Unfortunately such results are not encountered very often.

During pneumothorax treatment physical examinations and roentgenological control must be carried out frequently. My practice is to examine each patient by means of the fluoroscope before each treatment. In this manner a better check can be kept on the untreated lung and it is also an aid in determining the frequency of refills. Frequent filming should be resorted to, as the fluoroscope at times will not visualize fresh invasion of the disease. It is well to remember that occasionally densities will be noted in the better lung as a result of a shifting mediastinum. If this occurs, it is best to allow the lung to reexpand. If the markings are due to stasis they will disappear. With the appearance of active disease in the opposite lung, pneumothorax may have to be abandoned entirely. I have found it necessary to do this in nine cases under treat-

ment. In view of later observations, it might have been better if the collapse had been maintained cautiously. The possibility of arrest with pneumothorax, even with the disease on the opposite side, is better than without collapse:

Of the less frequent complications, spontaneous pneumothorax, emphysema and perforation of the lung may be mentioned. Spontaneous pneumothorax occurs either as a result of accidental puncture with the needle during pneumothorax treatment, or by the breaking of a cavity after the pleural layers are separated by inflation of

pneumothorax complicated matters further. Severe cases of emphysema have been described in the literature, but none have been noted among our patients.

Perforation of the lung due to caseation and consequent thinning of the pleura has been mentioned before as a possible complication during pneumothorax treatment. Breaking of adhesions especially during severe coughing spells will often cause a rupture with the subsequent development of an empyema. Perforation of the lung will lead to an open pyopneumothorax. It

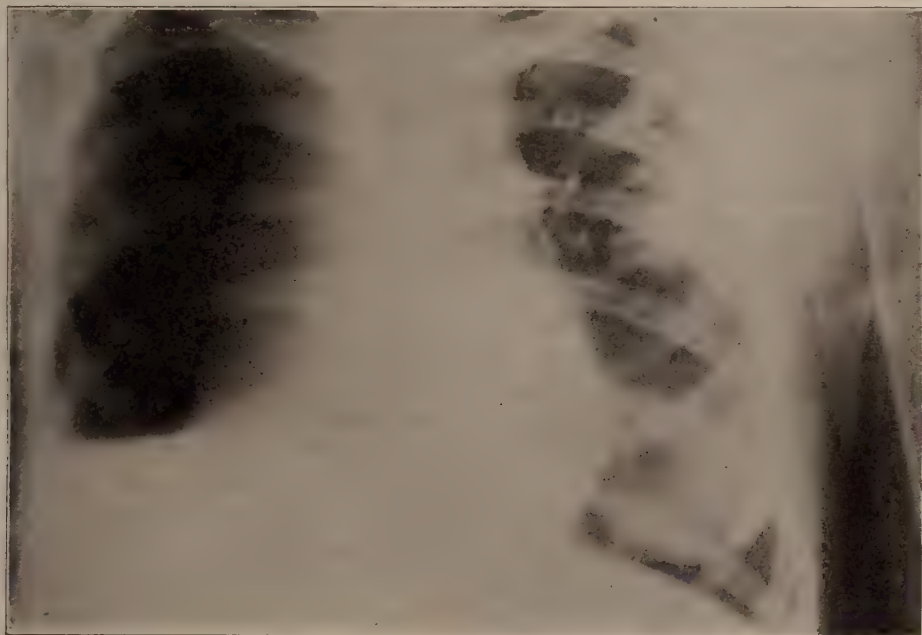


Fig. 8

Same case as Plates VI and VII. Collapsed left lung. Evidence of small amount of fluid. Heart slightly displaced to the right. General condition improved. Temperature normal. Cough subsided. Plate taken seven days after Plate VII.

air. W. Perry Morgan maintains that this complication is more common than is suspected. Fortunately it is not serious unless the contents of a cavity are emptied into the pleural space when pyopneumothorax will result. If air escapes along the needle tract into a subcutaneous tissue, emphysema is produced. I have seen one such case; the symptoms subsided within a few days and the patient did not complain of any distress. Fishberg states that when gas is given under high pressure this complication is observed frequently. In the case I saw the manometer reading was minus three at the end of the treatment. This patient continued under pneumothorax treatment for several months until a pyo-

is doubtful whether this condition can ever be cleared up as reinfection takes place from the ruptured lung. One case of this type occurred in our series of cases. It is evident that this complication will not respond to medical treatment. A surgical collapse as advocated by Sauerbruch, Brauer, Hedbloom and others is the procedure of choice in the presence of empyema. Burnand reports the incidence of 14 perforations of the lung among 300 cases treated by artificial pneumothorax.

Ultimate Results—It is evident that the early cases are those in which the ultimate results of artificial pneumothorax are the best. Perhaps no better analysis of a series of cases can be offered

to substantiate this viewpoint than the report made by Blanchet in 200 cases. He observed these patients for a period of 10 years. Of the 100 belonging to the far advanced group, in a period of ten years, 97 were found dead and 3 living. Of this group only 15 per cent. received some benefit while in 85 per cent. little or no improvement could be noted. In the moderately advanced group in the same period, out of 100 patients 24 are dead, 6 failing or stationary, 23 decidedly improved; in 18 the disease is arrested and 29 of these patients are working.

Erma Newer in an analysis of 91 cases observed over a period of 12 years, finds that the best results are obtained in those patients in whom the disease has been present less than a year before the treatment was begun. J. Gravesen cites Saugman's review of 211 far advanced cases from 2 to 12 years after discharge, which shows a lasting positive result of the pneumothorax in 38 per cent. of ALL the cases in which a pneumothorax of any noteworthy extent could be established. A comparison of this figure with the 11 per cent. of the cures in cases in which pneumothorax had to be given up owing to more or less universal adhesions, gives more credit to artificial pneumothorax. When we come to understand that the most favorable results depend entirely upon a satisfactory compression and that adhesions, which are always present in the advanced case, prevent such compression, we can readily understand why the best results are obtained in the earlier cases of pulmonary tuberculosis. It is true that a number of startling arrests of the disease are found in cases of advanced tuberculosis, but the observation of all men in this work is that pneumothorax treatments should be given in early unilateral cases.

In the series under pneumothorax treatment at this Sanitarium extending over a period of four years, I find that approximately 24 per cent. were discharged as arrested. Many of these are working daily. Twenty-one per cent. are improved. The remaining 55 per cent. are still under treatment. Admitting that pneumothorax may bring on some unfavorable complications, as mentioned, the treatment will often effect a cure in otherwise hopeless instances and will give comfort and no doubt prolong life in many others. Fishberg has well said that no surgeon hesitates in performing gastrotomy for cancer of the stomach although he knows that in all prob-

ability the patient will not survive three months. Palliative gastro-enterostomies are performed with the confidence that the best is being done. Even if life is not saved, comparative comfort is given during the last days. But in a certain number of cases pneumothorax is more than palliative; it cures the disease and should be applied in all cases where other methods of treatment have been tried and found wanting.

New remedies appear from time to time, claiming curative properties in pulmonary tuberculosis. They are rapidly discarded. Artificial pneumothorax not only stays on, but a wider field for its employment has been found. No physician who has given artificial pneumothorax a good trial will do without it.

For how long should the pneumothorax treatment be continued? Doubtless the best results are obtained when the collapse is carried on over a period of from two to five years depending on the individual case. The patient must be watched carefully and if at any time symptoms reappear the indications are for reinflation. Forlanini believes that many cases require pneumothorax treatment indefinitely. It is unsafe to discontinue in a shorter period than one year. It is better to continue too long than to fall into the error of allowing reexpansion to occur too soon. It is true that it may be inconvenient for the patient to come for refills every month or two, but this inconvenience is more than offset by the possibility of reactivation of the disease if the treatment is stopped too early.

If pneumothorax is valuable in well advanced cases, it is certainly more valuable when properly employed early in the disease. In the unilateral cavity case without contraindication, it is unjust to the patient not to employ this procedure. If several months of intensive rest have produced no improvement, pneumothorax certainly should be considered.

THE ANNUAL HEALTH INVENTORY

BERNARD FANTUS, M. S., M. D.

CHICAGO

There are some people who, though modern in every other respect, live medically in the dark ages. When sick, they either employ no doctor or one of the several varieties of witch doctors or quacks, self-styled "healers," who never examine their patients and use one remedy for all ills and that mostly the wrong one. Many peo-

ple still live today in what will soon be called the medical middle ages. They resort to the physician's service only when they are sick. The duty of the medical profession in the modern world is now, and will consist much more in the future, in keeping people well, and one of the chief agencies of this service will be an annual "health inventory" for each and every person.

Communities have long since recognized the importance of disease prevention by the organization of health departments, which slowly but surely are exterminating communicable diseases from among us. A number of progressive organizations have, for years, established preventive medical service and found that it pays. But the rank and file of the people do not yet realize that the medical profession is able to render each individual an invaluable health conservation service that not only may extend the term of life by years, but also reduce the time spent in suffering and sickness; all this at the expenditure of but one or two hours' time each year and of a very moderate professional honorarium, and it is up to the physician to educate his clients in this direction.

Thrifty business men insist on annual inventories; banks on periodic audits; wise automobile owners have their cars examined at intervals, so as to keep them in service; but even these same people are generally not yet aware of the fact that they owe their body at least as much care as their property.

What, patients will ask, can periodic examinations do for us? To answer this question exhaustively would take us much beyond the confines of the available space; merely the more obvious results can be touched upon here. Lack of proper examination keeps millions of human eyes in a crippled condition, lessening to an incalculable degree human efficiency and happiness, for eye strain causes fatigue, which in turn produces irritability, pessimism, "nervousness," and this leads to social maladjustment with its train of human misery. People, who are in need of refraction of the eye, often delude themselves with the idea that they can see well enough. They do not realize that they do so at the expense of constant action and consequent fatigue of the delicate muscles of accommodation. Large numbers of people do not hear well, simply because their ears are stopped up with wax. Limitation in the capacity of the nose, often easily

remediable, causing deficient air intake, leads to involuntary curtailment of activity and consequent lessening in accomplishment and success in life. Has any mouth-breather ever become world-famous or conspicuously successful?

Enough has perhaps been said about the necessity of semi-annual inspection of the teeth to render further comment on this topic superfluous at this time. But, if the teeth should be examined twice a year—and this is emphatically granted—should not the rest of the body be given the benefit of an examination at least once a year?

Finding thyroid enlargement, with or without tendency to hyper-activity of the gland, may prevent development of serious disease in the future.

Enlarged lymph glands may lead to the discovery of a hidden infection, pallor to an unobserved loss of blood, slight puffiness of eyelids or ankles to one of the causes of edema.

Poor muscle tone, defective chest development, faulty posture, flat foot, found early enough, can be corrected without much difficulty by appropriate exercises.

Tuberculosis, discovered early, is curable; neglected, it is fatal. The early recognition of abnormalities of the heart, of tendency to high blood pressure, to Bright's disease or to diabetes mellitus may result in a prolongation of life to one of nearly normal expectancy.

Foci of infection can be detected and taken care of before they produce disease; thus, justifying the health examination slogan, "Get the disease before it gets you."

For an examination to accomplish all this and much more, it must be made in a thorough and competent manner. To have the urine merely examined annually, as is advocated by so-called "Life Extension Bureau," is a little better than nothing, but it covers hardly 5 per cent, of the examination really necessary.

There are some people who hesitate to have a medical examination for fear the doctor will find something wrong with them, and thus disturb their sense of security. That this is a policy as unwise as the ostrich's traditional "burying the head in the sand" in the face of danger, needs hardly be pointed out. As a matter of fact, these examinations discover our degree of health, and any one must feel immeasurably more secure to know there is nothing wrong with him or to know just what is defective, than to be in doubt

and fear that there might be something seriously wrong. Indeed it is the best thing that can happen to us to have the weak points of our system discovered, so as to enable us to strengthen them if we can, or to ward off attacks upon them if they cannot be fortified.

At the conclusion of the examination, it is the physician's duty and privilege to give his client suggestions for the improvement of his physical or psychic condition, and the mode of life that will fit his individual case. Obviously, a person who is underweight will need an entirely different regimen from that of the person who is overweight, and both of these conditions—be it understood—can as a rule be easily corrected before they have become extreme. Here as elsewhere a moderate departure from the normal is unproportionately more easily corrected than great deviation.

Not only should the physician give our body a thorough overhauling and checking up at this time, as a mechanic does for an automobile, but he should also—to carry the homely simile a step farther—instruct the driver in the art of driving his machine most efficiently. Overwork and lack of engrossing occupation, too much pleasure and not enough diversion, excessive indulgence in stimulants, unwise balance of diet—all these errors and many others—should be discovered in the course of such an examination and appropriate suggestions given to correct them. This is a good opportunity also for sober advice on sex-hygiene and morality. Indeed, the prescription for the health client will consist much more generally in modification of hygiene rather than in the giving of drugs.

To accomplish the results aimed at, these examinations must be complete, more painstaking indeed and thorough than the usual "office" examination of a patient complaining of some ailment. In the latter case both the physician and the patient are generally satisfied if the examination and advice confines itself to the particular organ or system complained of. The "health inventory" cannot afford to slight any part of the body, for "in medicine more mistakes are made by not looking than by not knowing." To discover symptoms or signs of beginning disease obviously requires a sharper lookout than to merely find it after it has become definitely established. Hence these examinations are very time consuming, and the physician should not be asked

to make them without previous appointment, so as to enable him to set the necessary time apart for the purpose. For the same reason, these examinations will require a somewhat higher honorarium than that generally paid for the ordinary examination.

The records of the examinations, or a copy of them, should, in the author's opinion, be in the hands of the individual to whom they refer. Properly made and collected, these results of periodic examinations might become in the course of time an invaluable possession, most especially when sickness comes. They might then enable a physician, previously unacquainted with the patient, to obtain almost that insight into the person's "constitution" that is such an important asset to the family physician. These records might, indeed, become treasured heirlooms, in that they might reveal hereditary tendencies to disease and suggest means of circumventing these. They might also in time to come furnish the basis for a rational development of eugenics.

Does it not seem, therefore, that we ought to add to the old adage, "An ounce of prevention is worth a pound of cure," the maxim: "An hour's examination while we are well is better than days of treatment when we are sick"?

CARCINOMA OF THE COLON, A STUDY OF SIXTY PROVED CASES*

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The early diagnosis of carcinoma of the colon is of great importance because metastasis is a comparatively late occurrence in many instances. This is especially true of the scirrhus form which occurs most often in the sigmoid (L. Galliard²) but even the more frequent cylindrical cell carcinoma offers good prospects of cure after radical removal because distinct obstruction often precedes metastasis by a considerable length of time (Kaufmann³, A. Schmidt⁴, E. W. Allin¹).

These features induced us to make a study of sixty cases of proved carcinoma of the colon in order to discern the manifestations which may

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enable us to make an earlier diagnosis and thus to improve the prognosis by timely operation.

The first point we studied was the incidence according to age and sex. We found that 33 cases or 55 per cent occurred between the ages of 40 and 60 and that 20 or 33 per cent occurred in patients 60 years of age or older. An important finding was that three patients were under 30 years of age; one being 23, one 26 and another 27 years old. We thus see that carcinoma of the colon occurred most frequently between the ages of 40 and 60 but we must not lose sight of the fact that this disease may attack the young as well as those in the so-called cancer age.

A marked predominance in the male sex was also apparent; there being 42 males and only 18 females in this series. The greater incidence in males appears to coincide with the accepted statement that carcinoma of the gastro-intestinal tract is more common in males than in females and this point may be of some value in the differential diagnosis of conditions in the two sexes which may produce pain in the abdomen or signs of intestinal obstruction.

An analysis of the manner of onset shows that the clinical manifestations began gradually in two-thirds of the cases and that the average duration before admission to the hospital was about nine months. Five of the patients stated that their symptoms had existed two years before admission to the hospital. A consideration of these features makes us pause when we take into account the comparatively long time the condition was not recognized and again emphasizes the need for more prompt diagnosis in a disease which gives such distinct warning and for so long a period of time. On the other hand, a sudden onset, usually with the signs of acute intestinal obstruction was present in 19 cases or in nearly one-third of the entire series. A consideration of this point leads us to conclude that the lesion, with a considerable degree of narrowing, must have been present in these instances for some length of time without producing clinical manifestations until spasm or plugging of the narrowed channel with hardened feces or coarse residue occurred. The difficulty of recognizing carcinoma of the colon in the earlier stages thus becomes apparent when we dwell on the fact that one-third of the patients with more or less advanced carcinoma of the bowel for a long time

presented no symptoms referable to such a condition.

A study of the symptoms and signs which our patients presented was next undertaken and it was found that the presence of a tumor mass in the abdomen was probably the most certain single sign and that it was second in diagnostic value to exploratory operation. Unfortunately a mass was found in only 25 cases or in less than one-half of the series but we also learned that this sign, when present, is evidence that the condition is already inoperable. It is a mistake, therefore, to wait for this sign as valuable time may be lost and the mass, even when very large, may be inaccessible to palpation if it is located at the flexures under the ribs. The discovery of a tumor may be facilitated if hard feces or coarse intestinal contents accumulate just proximal to the carcinoma either as a result of actual constriction or spasm, thus exaggerating the size of the tumor.

Of almost equal diagnostic value is evidence of more or less permanent obstruction, and persistent constipation may be the first symptom to draw our attention to the possibility of carcinoma of the bowel. Constipation was present in 42 cases or in 70 per cent but was masked with alternating diarrhea in 12 instances or in 20 per cent. Diarrhea alone was present in six cases and can be explained by irritation of the bowel either above or below the lesion. From the foregoing it is evident that constipation or other disturbance of the bowel function, even diarrhea, in an individual of the carcinoma age should awaken our attention to the possibility of malignancy of the colon especially if the patient has not previously had such a disturbance of the bowel function. The more definite evidence of obstruction such as meteorism or visible peristalsis were observed in a large number of instances but must be regarded as evidences of obstruction which has already existed for some time and can hardly be considered an early sign.

The presence of blood in the stools, especially if found on repeated examinations is always of great importance. Occult blood in the stools was found in 21 cases or in slightly more than one-third of our series. None was found in nine instances and no examination for blood was made in 30 cases of which latter 19 were admitted with signs of acute obstruction and immediate operation was performed. The importance of finding

occult blood in the stools cannot be over estimated even though we failed to find it in nine instances, in one of which the stools were examined for 16 consecutive days. We must conclude, however, that while the presence of occult blood in the stools is a most valuable sign of carcinoma, the absence of this sign by no means excludes the possibility of such a condition existing in the bowel.

Vomiting was a symptom frequently complained of and was present in 31 cases or in about one-half. Nothing distinctive was noted about this vomiting and it occurred at various times, but fecal vomiting was never observed. Pain was complained of in about three-fourths of the cases and while there was nothing distinctive as to the character, location, relation to meals or bowel movement, this sign is of considerable value when it occurs and persists either constantly or periodically in an older person when no definite cause can be found to account for this pain. It has frequently been our experience that vague, crampy pain in the abdomen for which no definite cause could be determined eventually was found to be caused by carcinoma of the colon.

A study of the location of the carcinoma showed that 31 were in the sigmoid, 12 in the cecum, eight in the ascending colon, five in the splenic flexure, three in the transverse colon and one at the hepatic flexure. The fact that one-half of the cases were carcinoma of the sigmoid brings forward the hope than an earlier diagnosis may be looked for if sigmoidoscopy is more commonly employed as the lower bowel may be visualized for a distance of 35 cm from the anus with this method.

An absolute essential in the diagnosis of disease of the colon is roentgenological examination. The examination is best performed with the barium enema but valuable information may also be obtained by study of a barium meal 24 hours after ingestion. The latter method not only may show filling defects but may also show the proximal site of the lesions. There are two important roentgenological signs which are almost pathognomonic of malignancy of the colon. One is evidence of obstruction to the barium meal or enema with the presence of a palpable mass at this site; the other is a filling defect within the lumen of the bowel which is constant, ragged edged and associated with a palpable mass at the

site. Dilatation and accumulation of gas in the bowel proximal to the lesion and fixation of the affected segment of the colon are important findings which may also be present. A common type of filling defect is that caused by an annular scirrhous carcinoma which gives rise to a localized, narrow, more or less smooth, persistent, ring like deformity. This napkin-ring deformity may easily be overlooked or confused with spasm.

There are instances of carcinoma in the lower bowel which do not lend themselves to accurate roentgenological examination and this is most commonly the case in lesions of the lower sigmoid and upper rectum due to the fact that the bowel in these regions cannot be readily manipulated and that the enema tube may pass beyond the mass allowing the segment of bowel to fill proximally. These comparatively few instances in which the information obtained may be erroneous do not detract any from the value of roentgenological examination in suspected disease of the colon and this measure should be employed where more information is desired than can be obtained by the history and physical examination.

The treatment of carcinoma of the colon is surgical unless the condition is already manifestly inoperable and a colostomy of no further value. There are few cases which should not have at least a palliative colostomy and these few are those which cannot stand the shock of such an operation. The method of operation depends on whether obstruction does or does not exist at the time the diagnosis is made. The most conservative operation when acute or severe obstruction exists is a simple colostomy and when the site of the obstruction cannot be localized cecostomy is the operation of choice. The latter has the further advantage that a clear field is provided for a future operation should such a step seem advisable. Radical removal by the method of Mikulicz was used when the diagnosis was made but where there was no acute obstruction. The operation was performed in three stages. The first stage consisted of a simple colostomy during which time the liver was examined for evidence of metastasis and the entire field inspected to determine if the condition were still operable. The patient is allowed to rest for a few weeks during which time his general condition is improved and then the second step is performed. This consists of a mobilization of the

colon with resection of the mass and union by lateral anastomosis. End to end anastomosis may be used in the transverse colon or sigmoid. If the general condition of the patient is good and there are no evidences of obstruction a Mikulicz operation may be performed without a preliminary colostomy.

Resume:

1. A study of sixty proved cases of carcinoma of the colon was undertaken in an attempt to determine the earlier manifestations of the disease as metastasis is a comparatively late manifestation and early operation should offer very good prospects of complete cure.

2. While most of the patients were in the so-called cancer age there were three who were in the early twenties. More than two-thirds of the cases were in males.

3. The onset was gradual in about two-thirds and sudden in one-third of the cases. The latter group emphasizes the difficulty in diagnosis as the lesion must have existed for a considerable length of time without symptoms before there were signs of acute obstruction.

4. The most valuable single sign is the presence of a mass but this is also evidence that the condition is probably already inoperable. Disturbance in bowel function is of great significance, especially if occurring for the first time in a patient of advanced age. The disturbance may be either as constipation or diarrhea.

5. Occult blood in the stool is a valuable sign but its absence in no way rules out the possibility of carcinoma of the bowel.

6. Sigmoidoscopy may help in the diagnosis of this condition as one-half of the cases occurred in the sigmoid, a region accessible to the eye by aid of a sigmoidoscope.

7. Roentgenological examination is often of great value except in cases where the lesion is in the lower part of the sigmoid or upper portion of the rectum.

8. Radical removal is the method of choice and a colostomy is made a short time before resection is performed in order to build up the strength of the patient.

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OPERABILITY OF CANCER OF THE RECTUM

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There is no problem in the practice of medicine upon which the profession is more divided than the relative weight to be given each symptom or physical finding when determining the course of treatment of a cancer of the rectum.

Rectal carcinoma remains localized for a long while and this fact would make its radical removal a very hopeful undertaking if the growth were discovered promptly.

Epithelioma at the anus extends by continuity through the skin to the scrotum, vulva, vagina and up into the rectum. The inguinal glands are involved and also the middle hemorrhoidal system through which abscesses of the ischio-rectal fossa arise. Within the rectum cancer extends to the contiguous genito-urinary organs and backward to the coccyx. The retro-rectal and hypogastric glands are involved.

Digital examination is of great value in all rectal strictures, and in the case of cancer it is absolutely necessary, because here a diagnosis often can be made by this procedure alone.

Cancer of the rectum is but rarely located solely on the anterior wall of the rectum; the ulceration usually spreads around the lateral walls. The tumor generally forms a raised patch. The finger tip bumps against the lower edge and the induration of the base produces a decidedly characteristic sensation, and the finger can feel a crater-like depression. Almost always the slightest touch is extremely painful and exaggerates the tenesmus present. The finger, when removed, is covered with purulent matter and some blood if the cancer is ulcerating. A short finger may not reach a cancer located high up; however, by crowding in the anal sphincter, and pushing down the suprapubic region (the recto-abdominal bimanual examination), if the patient is thin, the lower limit of the growth may be reached. Perhaps a hard nodular mass will be disclosed if it involves only one side of the rectum, while the other side is covered with normal mucous membrane; or the mass may encompass the rectum, leaving only a small opening in the middle. Its peculiar character, as dis-

closed by palpation, namely, the hard, rough, irregular mass projecting into the rectum, easily differentiates it from simple stricture which later is smooth, or from a tuberculous stricture, which undermines the surrounding areas.

Scirrhous.—The commonest form of cancer in the rectum is the scirrhous. This usually occurs just above the internal sphincter or in the ampulla of the rectum. It begins more frequently on the anterior wall of the rectum, although it may occur elsewhere. It starts as a hard nodular mass and extends circularly until it involves the rectum all around, leaving only a small opening in the middle. The latter condition is the usual one found when the physician is consulted. Mickulicz found three-fourths of his cases progressed to this stage. Gussenbauer estimates that 65 per cent. of all rectal cancers are of this variety. These cancers grow lengthwise of the gut but very slowly and rarely involve more than two inches.

The encephaloid cancer occurs as a soft polypoid mass very like a benign adenoma, but has a broad base that pervades the submucous tissue. This variety constitutes 15 per cent. of the rectal cancers. They break down very early and with few exceptions have reached this ulcerative stage by the time they are seen by the physician. Palpation suggests a feeling as if irregular masses had been broken off roughly. Raised edges surround the ulcer and give it its crater-like appearance. The well annointed finger, when inserted, feels this rough, irregular edge all around the constriction, and then suddenly passes into a wider channel above where frequently masses of hardened feces are found. Exceptionally, a soft polypoid mass is found.

Every possible care must be exercised in passing the finger through the obstruction where it surrounds the rectum, especially if near the peritoneal surfaces, for fear of tearing through the friable wall and entering the abdominal cavity. The necrosis may leave a very thin partition at some one point or the ulceration in the gut above the obstruction may be very deep. The finger must never be pushed hurriedly through a carcinomatous stricture, and even soft bougies must be managed with great caution. Rupture and sudden death have resulted from carelessness in making such an examination.

Cancers high in the rectum and in the sigmoid

colon are the most difficult to diagnose and have repeatedly been mistaken for a diseased ovary, salpingitis or other pelvic tumor. The rectoscope is valuable, but even this instrument does not inform us as to the upward extent of the neoplasm, its depth and the extent of the sloughing. Hence, a thorough roentgen examination is indispensable. A proctoscopic examination so excites the rectal mucosa that a patient may have difficulty in retaining an enema during the next several hours, consequently, a roentgen examination should not be attempted within twenty-four hours after the use of the proctoscope.

Preparing the patient for a roentgen examination consists in emptying the colon, by giving an ounce of castor oil on the evening before the examination and a cleansing enema shortly before the examination.

A roentgen examination for carcinoma of the terminal gut, as made by an expert presents very definitely and distinctly the filling defects by a barium mixture. The patient should be examined with the screen, and x-ray negatives should also be taken, in order to determine accurately the condition and location of the lesion. By such a carefully interpreted x-ray examination, very few cancers of the pelvic bowel can escape diagnosis, while, at the same time, undue importance will not be given trivial deviations from the normal.

The pelvic bowel may be examined after a barium meal by mouth or as given per enema, or both. The clyster is the more frequently used and in the study of obstruction of the bowel, the clinician will gain valuable evidence when watching the inflowing enema. The patient lies on his back on the screen table and the opaque mixture fills the rectal ampulla. The sigmoid flexure and the rest of the colon fill irregularly; and at this time, palpatory manipulation is employed. The patient's abdomen must be relaxed, his thighs being flexed, and he should breathe through his mouth. The tube and the screen may be shifted during the examination, so as the better to observe particular regions. Turning the patient by changing the angle of the ray also will help in the study of kinks and angulations.

There are wide variations in what must be considered pictures of the normal terminal gut, that is to say, where junction is normal and

there is no visual lesion in the normal rectum. The descending colon usually narrows somewhat at the sigmoid flexure and expands again at the ampulla, then tapers toward the anus.

The most important sign of the x-ray picture of the pelvic bowel is the filling in of defects in the contour of the bowel because such change from the normal outline may be owing to spasm of the colon, to feces, intestinal gas, adhesions, extrinsic pressure on the intestine or tumor growth. In cancer, this irregularity may be sharply outlined or definitely shaded.

In the colon, obstruction other than cancerous is very rare. The filling defect shows the proximal limits of the disease. This deformity of the outline of the intestine may show a concentric local narrowing of the lumen, or it may be limited to one side. Even after a tumor has been found, we have to differentiate diverticulitis, tuberculosis, actinomycosis, syphilis and benign tumors within the colon. Spastic contractions of the sigmoid colon show as small irregular haustra.

Case 1—About one year ago, the patient began to suffer pain in the pelvis and rectum and to bleed from the anus. Later, he was operated upon for hemorrhoids, but without getting relief. He admitted losing weight, but thought that might be because of his worrying and his disturbed digestion. Combined digital examination disclosed a large mass in the pelvis. An x-ray photo shows cancerous involvement of the entire sigmoid colon.

Case C-3—The patient, a woman, noticed constipation coming on for about two years. She lost 70 pounds in weight. Has no pain, but rather a heavy, bearing-down feeling in the left pelvis. Has to keep the bowel contents liquid so as to have evacuations. Has a yellow fecal discharge from the vagina. Examination discloses a large mass in the pelvis and a rectovaginal fistula at the site of the growth. The fistula will admit a thin pencil. Semi-solid feces were forced out during examination. The x-ray photo reveals a marked annular constriction of the rectum.

Case 3—Inoperable cancer of the rectum with almost complete obstruction of the rectum. Six months previously, the patient experienced difficulty in having bowel movements. Cathartics caused colic and a feeling of soreness and obstruction in the pelvis. "The stool does not seem to be able to get out." The patient was having obstructive symptoms at the time this examination was made. Laparotomy was performed and the rectum was found well matted down to everything. Colostomy through the left rectus was performed, using that muscle as a sphincter for the newly formed anus.

Case 15—About a year ago the woman noticed a pro-

trusion at the anus (said to have been a hemorrhoid) which disappeared under treatment by her physician. For the last six months, she has lost blood from the anus. Has lost 37 pounds, has had no formed feces for the past two months. She has liquid stools by taking epsom salts.

Inspection of the anus reveals nothing. By digital examination, the finger meets, 1½ inches up within the rectum, a firm and hard resistance, through which there is a very small passage. The finger cannot be introduced. Vaginally, the tumor is found fixed to the uterus. Bimanually, an index finger in the rectum and a hand above the pubes reveals a mass almost filling the pelvis. The picture shows the tumor with filling defects in the lower rectum, a widening at the ampulla and another almost complete stricture at the junction of the rectum and sigmoid colon.

Case C-19—For the past seven years this patient has occasionally had pain in the rectum. Several months ago he had a boil which ruptured and still is draining. At times, he has considerable pain in the rectum, while, at other times, he is free from pain. One and one-half inches within the rectum, there is felt a firm nodular constriction which mats the structures together. An x-ray photo shows a stricture of the lower rectum.

THE ANTITOXIN FALLACY

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George Bernard Shaw is fond of saying, "If you do not say a thing in an irritating way, you may as well not say it at all, because people will not trouble themselves about anything that does not trouble them." Though this attitude does not generally prevail in the discussion of scientific medical topics, it may occasionally prove the only alternative forced upon us by an emergency. Such an emergency is the untimely and preventable death of those 10,000 children that still die annually in the United States of diphtheria. It is true that the percentage of deaths from this disease has decreased in the last few years, but it is also true that this decrease in mortality is not due to better treatment but to improved hygienic conditions and preventive measures. The treatment itself has remained practically the same ever since Behring brought about the great reduction in the death rate of diphtheritic children by the introduction of his antidiphtheritic serum.

Thus our inability to save more children through more advanced clinical efforts can not be blamed to a therapeutic impossibility of a further reduction in the mortality rate, as I have shown this to be possible by finding and adminis-

tering the necessary complement¹. It must be blamed entirely to the antitoxin theory and its devotees, who consider an attack upon this theory as heresy and stubbornly refuse to listen to any arguments against it.

To save these needlessly dying American children two ways are open upon which to progress. The first way is to continue scientific argumentation in the parliamentary, old-fashioned style by bringing more and more proofs against the silly antitoxin theory with the prospects that, as experience has taught, only after years of incessant labor the antitoxin fancy is gradually uprooted and overthrown. In this instance, however, how can we assuage our guilty conscience knowing that this endless procession of doomed children could be stopped if we would but discard the antitoxin theory and adopt the proper line of treatment?

The second way is to force an unwilling attention and to compel a general discussion of the antitoxin theory by placing the responsibility individually, and, following the advice of Shaw, by using such language as will hurt and hurt so much that the antitoxinists, the friends and supporters of the antitoxin theory are forced into the open and either defend their theory or drop it. In both instances its doom is sure.

There seems to be no choice. Patience and forbearance with antitoxinists spells death and destruction to thousands upon thousands of American children annually. If, therefore, some seemingly harsh words or sentences are used in this treatise, let it be understood that they are prompted by sheer necessity in order to force an issue in the interest of those victimized children whose gloomy graves stand out as a mute reproach of the utter therapeutic helplessness into which the antitoxin theory has engulfed us.

To bring the proofs necessary to support these statements, let us disentangle facts from fancies by dissecting point after point, using common sense principally and adducing as proofs only facts that can be substantiated by clinical or laboratory evidence.

Facts and Fancies Concerning Antitoxins.—Antitoxins is the name given to bodies which appear in the blood of man and higher animals if certain specific antigens are injected or enter the body in the form of pathogenic micro-organisms.

Experimental and clinical facts, interpreted in the light of the scant knowledge on immunity

processes as it existed a score or more of years ago, seemed to suggest that these bodies serve the purpose of neutralizing the toxic substances formed in the body during the course of infectious diseases. Hence the name "antitoxins." The infinitely better and vastly extended knowledge acquired during the years that followed and the innumerable biological facts flatly contradicting this theory that gradually came to light were not sufficient to cause a revision of the old-time deception. It still exists today in the same form in which it was originated. As proof thereof may serve a statement made by Simon Flexner,² of New York, who says that "antitoxic serums act not directly on the infecting bacilli, but on their liberated toxins which they neutralize, after which the body readily rids itself of the bacilli themselves." The authoritative weight of his opinion may be taken from the fact that his article heads a series of papers on "Biologic Therapy," which has been authorized and initiated by the Council on Pharmacy and Chemistry and was published under its direct auspices in the *Journal A. M. A.*—a series that has been republished later on in pamphlet form as "a guide for physicians."

The opinion expressed by Flexner is seemingly supported by the experimental finding that diphtheria bacilli grow luxuriantly upon a medium containing antitoxic serum, that is, great numbers of antitoxins. Commenting on this experiment in an editorial of the *Journal*³, Simons lightly concludes that "the fact that diphtheria organisms grow luxuriantly in antitoxins speaks against any germicidal virtue." Never has a more misleading statement beguiled the readers of the *Journal*. On the surface, it is true, this conclusion may seem warranted. On due consideration, however, we readily find that the reverse is true, namely, that antitoxins have germicidal virtue⁴. Simons regretfully ignores the well known fact that antitoxins, in order to be able to kill micro-organisms, must have complement. Without complement, they are absolutely inert and represent just so much food for the bacilli to live upon, as shown in the experiment.

That diphtheria bacilli grow luxuriantly in antitoxic serum, which contains no complement⁵ is, therefore, no proof that the antitoxins have no germicidal virtue. To test their germicidal power, we must bring them into conditions where they can find the necessary complement. This

can be done by injecting them into healthy animals, where complement is naturally always present. Their action upon the bacilli is, then, swift and unmistakable.

Experiments to this effect have frequently been reported in literature. Of the many at our disposal only three shall be mentioned, one actually being sufficient to prove our point.

1. Opitz⁶ tells us that guinea pigs, if injected with antidiphtheritic serum, show no symptoms upon the inoculation of quantities of diphtheria bacilli many times surpassing the lethal dose.

2. Pawson and Redowitz⁷ report that the small dose of $1\frac{1}{2}$ to 2 units of antitoxin injected simultaneously with large doses of virulent diphtheria cultures protect guinea pigs against all ill effects.

3. Pico⁸ warded off the fatal outcome in animals injected with lethal doses of living diphtheria bacilli by injecting simultaneously a mixture containing antitoxins, while all the control animals died.

If biological experiments mean anything at all, those cited above offer conclusive proof that Simons is wrong in his conclusion, and that, in spite of Flexner, antitoxins do kill their respective organisms, whenever and wherever they meet them, provided the necessary complement is at their disposal.

After all, however, these proofs are not really necessary, though valuable and convincing they may be as collateral evidence. The fact that antitoxic sera are successfully used for immunizing purposes is all that is needed to furnish overwhelming proof of their germicidal virtue. We need just ask ourselves what the concept "immunity" implies. So far as I can see, it means that the immune body is able to ward off disease by killing the respective organisms immediately after settling. In other words, immunity is always bactericidal. The assumption of an "antitoxic" immunity is a fancy too silly to be discussed here. With the proof furnished that antitoxins do kill their respective organisms, it is no longer needed and must necessarily be abandoned together with the antitoxin theory. If I am wrong, and if Flexner, Simons and the members of the Council on Pharmacy and Chemistry have any other explanation in conformity with the antitoxin theory, it is earnestly hoped that they will not shirk their plain duty to enlighten us.

That the existence of immunity is intimately connected with the antitoxins is proven by the well-known experience that in passive cases immunity continues only so long as the injected

antitoxins remain intact and ceases as soon as they are destroyed by the host. What, then, is their mode of action, if they are not germicidal? What, furthermore, kills in successful clinical cases the massive cultures in the throat of the diphtheritic child so suddenly after the injection of the antitoxins, if these "do not act directly upon the infecting bacilli?" That "the body readily rids itself of the bacilli themselves" after the neutralization of the toxins, as Flexner states, is, of course, but empty, flippant talk, not supported by any evidence. It appeals to the same non-existing fanciful power that is invoked by those who lay on hands or heal by prayers or absent treatments. If the body had any such mysterious germ-killing agency, independent of the antitoxins, why could it not rid itself of the few bacilli that started the disease at a time it was not as yet weakened by disease and toxins did not as yet exist? These are pertinent questions to be answered by Flexner. If he will not, or can not, answer them, the full responsibility to reply adequately falls upon Simons and the members of the Council on Pharmacy and Chemistry, who selected him and back him up. They should not, and can not without inviting the most dreadful consequences, shirk this responsibility. Life or death of tens of thousands of our American children annually depends upon their attitude, either proving their assertions or admitting their mistakes.

Facts and Fancies Concerning Toxins.—The difficulties met with in disentangling facts from fancies during the preceding analysis of the antitoxins are greatly augmented when it comes to toxins. This is due by no means to any lack of concrete information regarding these toxic bodies. An enormous amount of zealous work has been devoted to their study—and with gratifying results. But, as in the case of antitoxins, the facts evolved do not fit into the frame of the antitoxin theory and are, therefore, simply ignored. So it happens that also here the crude and antiquated ideas, originated some twenty or more years ago and based upon the superficial knowledge of that time, are handed out still today, undiluted by our newer and better knowledge. In support thereof another quotation is taken from the *Journal A. M. A.* and is presented here as a basis for the now following characterization of the toxins. It comes from an article furnished by the Dicks. Summarizing former work⁹ they say: "We were

able to show that the hemolytic streptococcus growing in the throat produces a soluble toxin which is absorbed into the blood stream and causes the characteristic symptoms of scarlet fever, including the rash." Thus, first, and above all, they inform us that toxins are "produced by the streptococcus growing in the throat," or, in other words, that they are produced by living organisms. This concept of the origin of toxins from living micro-organisms is one of the main pillars upon which the antitoxin theory rests. It is, therefore, of great importance for our purpose to scrutinize more closely the way toxins are originated.

In doing so we find that toxins, if produced by, or liberated from, living organisms, can only be one of two things; they can be either an excretion or a secretion.

In viewing both possibilities, let us assume, first, that toxins are an excretion, that is, a waste product. The well known fact, however, that toxins, when injected, produce immunity against their parent organisms, militates against this assumption. Specific immunity can not be developed unless the cells of the host come into contact with the respective specific antigen. Consequently, toxins must contain specific antigen, that is, they must contain the body substance specific for the organisms from which they come. To build up specific body substance is, however, a laborious, and even vital, task for any organism, as it needs this substance for growth and multiplication. To waste it by excretion in the form of toxins would be as insane as if a merchant, after working industriously and diligently to make money, would throw it out of the window when made. But Nature is no such foolish waster. We must, therefore, take it as granted that toxins can not, possibly, be an excretion.

There is left but the other alternative, namely, that toxins are a secretion, that is, that they are "produced" or "liberated" for a purpose. But what could this purpose be? In spite of much deliberation and thought spent on this subject, I am utterly unable to make even the faintest suggestion. We must and do, therefore, turn again to the antitoxinists for an answer. But while I can see no reason why micro-organisms should secrete toxins, I can see a most important reason why they should not secrete toxins. As stated above, the injection of toxins leads to immunity. In other words, toxins give the host

the weapon to subdue and kill the microbes. Thus, toxins produce, so to speak, the rope with which to hang the microbes and their secretion would be an act of suicide. The scores of thousands of deaths annually from infectious diseases show, however, clearly that pathogenic microbes are not endowed with suicidal tendencies, so that the assumption that toxins are secreted can also be dismissed as belonging to the realm of impossibilities.

Besides those cited, there are other proofs showing that toxins can not, possibly, come from living microbes. Though toxins are abundantly produced in some cultures, they do not appear therein in the first days, when the organisms grow and multiply most prolifically. They begin to appear later on when, in consequence of the accumulation of metabolic products injurious to their health and life, microbes begin to die and disintegrate. Thus, the Dicks themselves recommend to gather the toxins of the scarletinal streptococcus between the fourth and the sixth day after the inoculation of the broth.

Clinical proof against the origin of toxins from living organisms is furnished by the following facts. The onset of specific symptoms in acute systemic infectious diseases, for instance, in scarlet fever and in measles, is preceded by the so-called "period of incubation." During this period the pathogenic invaders multiply and spread unchecked. Their growth and multiplication can go on unimpeded, as the defensive mechanism of the host is not, as yet, developed. But, strange to say, specific symptoms due to toxins are conspicuous by their absence during all these days. Toxins must, therefore, be not existing at this stage, just as they are non-existing during the first days of the cultures. Their production by living, growing organisms is, thus, put out of question, as they would be there in both instances. It is not until the defensive mechanism of the host has been developed¹⁰ and the destruction of the invaders mounts by leaps and bounds that toxic bodies suddenly appear, as shown by the sudden rise of fever, the onset of the quickly spreading rash and the now rapidly developing toxic condition of the patient. Yet, undisturbed by the mass of clinical evidence against them—the incubation period free of toxins; the flooding of the blood with specific organisms at the early stages of the diseases, as shown by Ferry and Fisher¹¹ in measles and by

Cineu and Manoliu in scarlet fever; the sudden onset of the specific symptoms at the time when the reaction of the host begins, independent of the growth and multiplication of the microbes; the successive spreading of the rash from the head downward, so characteristic for scarlet fever as well as for measles and smallpox, irrespective of the condition of the throat; the presence of the living contagion in the scales desquamating from the skin—the Dicks insist that all these symptoms are due to toxins produced by the streptococcus growing in the throat and absorbed therefrom into the blood stream. Such contentions can only be amusing. They are such a co-

especially by Victor C. Vaughan, of Ann Arbor, Mich., and his collaborators. It would be impossible to adduce here even a fair fraction of this voluminous evidence. Only the shortest possible synopsis can be given—just enough to allow a ready comprehension of the situation. The details can be found in Vaughan's book.¹² Suffice it, therefore, to say that every protein molecule, no matter where it comes from, whether from the animal or the vegetable kingdom, has a nucleus about which the complex structures cluster that make up the large bulk of this molecule. As the molecule is broken down during the process of disintegration, this nucleus is more and more de-

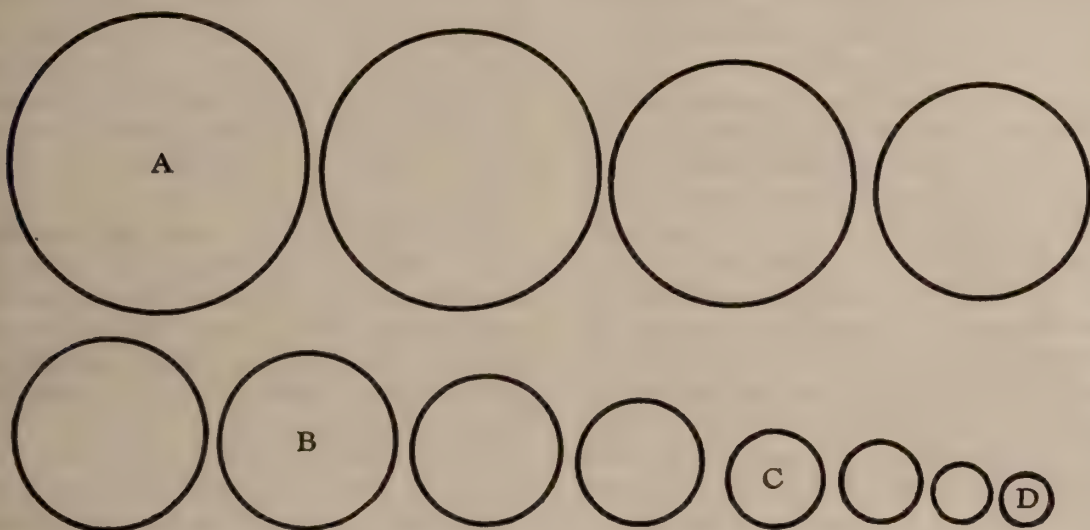


Fig. 1. A. Unbroken molecule. B. Specific Toxin. C. Acid, non-specific poison. D. Harmless end product.

lossal mockery, such a colossal travesty on scientific truth that a debate is out of question until the Dicks, aside from mere fancy statements, give us at least a semblance of evidence supporting their contentions.

Just when and wherefrom the toxic bodies develop during the course of infectious diseases is not far to seek after what has been said before. Their intimate connection with the killing of the pathogenic invaders by the host leads us, even from simple clinic observation, to the inevitable conclusion that they must originate during the disintegration of the dead microbes themselves or, in other words, that they must be digestive split products of the foreign protein composing the body substance of the invaders.

This conclusion is supported by a superabundance of experimental evidence, produced by a host of European and American investigators,

nuded and shows a gradually increasing poisonous character, owing to its acid nature. These conditions can readily be visualized by likening the nucleus of the molecule to the stem of a grape around which the rest of the molecular structures cluster as the berries of the grape do around the stem.

The relation of the toxins to this poisonous nucleus on the one side and the interrelation of these two to the unbroken protein molecule on the other side seems to be very little understood, though a definite knowledge of these matters is of greatest importance from a scientific as well as a practical viewpoint. I have, therefore, added here a graphic depiction of these interrelations to facilitate a better comprehension of this only seemingly complicated subject. (Figure 1.)

The circles, which gradually decrease in size, symbolize the protein molecule as it is broken

down into smaller and smaller fragments. The smallest circle represents the end products that are the result of normal catabolism. They are the products ready for excretion and are non-poisonous. Of the intermediary products, between the unbroken molecule and the end products, two are of interest to us: 1, the toxins and, 2, the poisonous nuclei. As there is a vast difference between them, we have to take them up separately.

1. The toxins, also called "soluble toxins" or "exotoxins." They are the result of a rather deep disintegration, or digestion, of the original molecules. Their size is much smaller than that of their parent molecules and they readily pass the fine porcelain filters that hold back the unbroken protein. Nevertheless, they are still highly complicated bodies. As we have seen above, they still constitute specific antigen, that is, they still retain the structure of the protein specific to the source from which they come. It is due to this fact that the injection of specific toxins, for instance, of diphtheria or tetanus toxins, leads to immunity against the respective organisms. Under normal conditions parenteral foreign protein is removed only after it has been disintegrated into its end products, that are ready for excretion. Furthermore, specific antigen can be digested, or disintegrated, only by specific ferments. Therefore, the body, upon the inoculation of toxins, is forced to elaborate specific ferments to remove the injected specific antigen. With the elaboration of these specific ferments, however, immunity is established, because these same specific ferments produced to disintegrate the injected specific toxins can, and do, also kill and disintegrate the specific organisms from which these toxins come. A concrete example of this kind has been furnished above by showing that the antidiphtheritic ferments, or antitoxins, elaborated upon the injection of diphtheritic toxins, promptly kill the diphtheria bacilli, provided complement is present.

2. The poisonous nuclei, also called "endotoxins." As shown in the graphic picture above, they develop from toxins by further disintegration. Their character, as Vaughan has shown experimentally and Pfeifer has shown clinically, is identical in all instances, no matter from what source they come. They are divested of all specificity and may be likened, to again use our former simile, to the stem of a grape robbed of

all its berries. When injected, they do not lead to immunity for the reason that the body of the host is not forced to develop specific ferments for their disintegration. Alkali detoxifies them in vitro and in vivo, as their toxicity is due to their acid nature. Clinically this fact is of greatest importance. The high acidosis which develops in acute infectious diseases, especially in influenza, when, at the time of the full development of the specific symptoms, the killing and disintegration of the invading organisms by the host is going on at a lively rate, is due to these acid nuclei denuded of all specificity. Their similarity, in all instances, is shown by the clinical experience that sodium bicarbonate is efficacious in relieving the distressing toxic symptoms equally promptly, or even miraculously, whether they develop during measles, scarlet fever, influenza, pneumonia, or during any other acute infection.

Facts and Fancies Concerning the Neutralization of Toxins. In considering this subject we must keep in mind that toxins as well as antitoxins are both highly complicated albuminous bodies. From a chemical viewpoint, therefore, a neutralization of toxins by antitoxins seems out of question. All those workers who attempted to prove it admitted their failure at the end. Furthermore, a chemical neutralization, such as the neutralization of an acid by a base or vice versa, is directly opposed by the fact that the union of toxin and antitoxin is not stable. It is that of a barnacle attached to the bottom of a boat and can readily be disrupted, for instance, by heat. In this connection it will be of interest to recall an incident which not so long ago aroused much unfavorable comment in medical as well as in lay papers. In January, 1924, there occurred in Massachusetts severe symptoms of intoxication in 42 out of 54 children who, for immunizing purposes, had been inoculated with diphtheria toxin-antitoxin mixtures that had previously been exposed to prolonged freezing. During the investigation that followed the authorities came to the conclusion that the severe symptoms exhibited by the 42 children were due to the dissociation of the antitoxins from the toxins as a consequence of freezing. If freezing can restore the toxic qualities of perfectly neutralized toxins, as it did in this instance, the neutralization can not possibly be a chemical one.

Very recently, a flood of light has been thrown

upon these matters by Larson and Eder¹³ and by Larson, Huenekens and Colby,¹⁴ of St. Paul and Minneapolis. They found that sodium ricinoleate and other soaps detoxify toxins better than the antitoxins do, and that they detoxify all the different kinds of toxins equally well without disturbing their immunizing qualities. Though Larson and his collaborators admit their inability to explain these findings, the cause of the phenomenon can readily be furnished. Soaps are strongly alkaline. As the poisonous bodies that bring about the toxic symptoms are acid in character, the detoxification is due simply to the neutralization of the acid by an alkali. That the same alkali detoxifies so many different toxins, as found by these same investigators, can also readily be seen. It is due to the fact, repeatedly mentioned above, that the acid nuclei of the protein molecules are identical, or similar, in all instances at least so far as their affinity for alkali is concerned. If the soap neutralizes the acid radicals immediately within the toxin or if it anchors therein to unite with the acid as soon as this gets free, remains to be seen. At any rate, the facts adduced are a staggering blow to the antitoxin theory. To think that Nature should elaborate laboriously a specific antitoxin for each of the great variety of toxins while a little alkali will accomplish the detoxification in all instances equally well or better, is too silly to be considered seriously by anyone who has had the privilege to study, even superficially, Nature's wonderful work.

With the chemical neutralization dismissed, we still have to consider a possible "biological" neutralization. It is an undeniable fact that the addition of a definite quantity of antitoxic serum to a definite quantity of toxins makes, upon their injection into an animal, these otherwise poisonous toxins innocuous. It is a further fact that, if the proper mixture has been determined, multiples of the original quantity may be injected with equally happy results. It is this latter fact that has helped much to support the antitoxin theory. But even this fact disproves rather than supports the antitoxin theory, inasmuch as this law of multiples, as it is called, does not hold good if larger quantities of neutralized toxin-antitoxin mixtures are injected. For instance, an animal may show no symptoms if it is injected with, say, 10 or 12 lethal doses of toxins, neutralized by antitoxins. It does, however, show

symptoms, even of the most serious kind, if, say, 15 or 20 lethal doses of toxins, also fully neutralized by antitoxins, are injected. Besides, Behring⁶ already has shown that toxin-antitoxin mixtures, completely neutralized for one species of animals, say guinea pigs, are poisonous, or highly poisonous, for another special of animals, say mules, and may even kill a third species, for instance, monkeys. To cap the climax, it may even happen that highly immunized horses, whose blood is swarming with antitoxins, are killed by quite small doses of neutralized toxin-antitoxin mixtures that do no harm whatsoever to non-immune animals. Under such circumstances, biological neutralization is, of course, also out of question.

However, applying the principle of constructive criticism, which has been upheld throughout this treatise, it will be necessary to explain just why antitoxins neutralize toxins in one instance and fail to do so in another instance. As we have seen above, antitoxins are digestive ferments that digest, or disintegrate, the toxins into innocuous end products, ready for excretion. If this disintegration is sufficiently fast, the poisonous intermediary split products do not exist long enough to irritate the tissues. They are broken down into harmless end products before inflammatory symptoms can be caused. In order to accomplish disintegration with sufficient speed, enough ferments or antitoxins must be set at work. If this has been done, that is, if enough ferments have been added to the toxins to disintegrate them so fast that toxic bodies do not exist sufficiently long to cause inflammatory symptoms—we say that the toxins are neutralized. But the fact, evolved above, that toxin-antitoxin mixtures neutral for one species of animals may be toxic for another and even lethal for a third species, proves conclusively that, besides the toxins and the ferments, another, a third, factor enters into the process of neutralization. This third factor is complement.

Antitoxins and Complement. Complement is a substance which ferments need while working. It is, so to speak, their chemical tool. Complement is to the ferment what dynamite is to the laborer who is blowing up stumps. Without complement ferments can no more kill and disintegrate microbes than the laborer can blow up stumps without dynamite.

Ferments are a product of the cells and can be

elaborated according to the needs of the body. They are not used up during their activity. Just as the laborer can blow up one stump after the other, so ferments can disintegrate one protein molecule after the other or can kill and disintegrate one microbe after the other. Thus, the experiment of Pawson and Redowitz⁷ shows that as little as $1\frac{1}{2}$ to 2 units of antitoxins can kill large doses of virulent diphtheria cultures. On the other hand, complement is used up in proportion to the work accomplished, as is dynamite. It is not elaborated by the cells of the body and can, therefore, not be replenished by cell work.¹⁵ Its available quantity is limited. The original supply of complement, that is, the supply which is naturally present in every healthy body and is stored in the nuclei of the cells,¹⁶ is reduced during the activity of ferments in proportion to the number of germs killed and disintegrated, just as the original supply of dynamite is reduced in proportion to the number of stumps blown up. When the complement is all consumed, the ferments stop working, as does the laborer, per force, when his dynamite is gone.

The absolute and unfailing dependence of the activity of ferments upon the presence or absence of complement is clearly demonstrated in the 1, 2, 3 and 4 plus phases of the Wassermann reaction.

To make a Wassermann test we take specific, specially prepared, ferments that are able to dissolve red sheep blood corpuscles. If we add these sheep corpuscles to the ferments, the corpuscles are not dissolved until we also add the chemical tool of these ferments, that is, the complement, contained in fresh guinea pig serum. If, thus, the ferments plus corpuscles plus complement are placed together into a test tube in a suitable quantity of fluid, all red sheep corpuscles are dissolved. The amount of complement necessary for a given test is always carefully titrated, so that it is just sufficient to dissolve the added sheep corpuscles. If we add now to the mixture of ferments, corpuscles and complement something that takes away a portion of the complement, say, one quarter of it, as we can do by adding a definite quantity of syphilitic blood containing complement fixing bodies—the ferments have enough complement left to dissolve only three-quarters of the blood corpuscles. One-quarter, or 25%, of them is left undissolved. In the same way, the laborer, who has been supplied with sufficient dynamite to blow up four stumps, can blow up

only three stumps if one-quarter of the dynamite is again taken away from him. As the positive Wassermann reaction is characterized by the inhibition of hemolysis, the 25% of undissolved corpuscles, or the one stump not blown up, represent a one plus Wassermann reaction. If we add sufficient syphilitic blood to take away one-half of the complement, or if we take away from the laborer one-half of his dynamite—50% of the sheep corpuscles remain undissolved, or two stumps remain not blown up. This would represent a two plus Wassermann reaction. If we add sufficient syphilitic blood to take away three-quarters of the complement, or if we take away from the laborer three-quarters of his dynamite—75% of the sheep corpuscles remain undissolved, or three stumps remain not blown up. This would represent a three plus Wassermann reaction. Finally, if we add sufficient syphilitic blood to take away all the complement, or if we take away from the laborer all his dynamite—all sheep corpuscles remain undissolved, or all the stumps remain not blown up. This would represent a four plus Wassermann reaction.

These details have been advanced so minutely in order to demonstrate clearly the supreme influence exerted by complement upon the activity of ferments in determining precisely the amount of work that may be accomplished. It matters not whether these ferments dissolve red blood corpuscles or kill and disintegrate pathogenic microbes. There is no difference between them so far as this fundamental principle is concerned. It needs complement to keep the hemolytic ferments active in the Wassermann test and it is complement that makes the diphtheria antitoxins swiftly kill the diphtheria bacilli when injected into an animal—while both kinds of ferments are paralyzed if complement is lacking, as it is seen in the positive Wassermann test and in the diphtheria culture to which antidiphtheritic serum has been added.

The arrest of the activity of ferments through lack of complement leads to different consequences according to whether or not the tissues are able to make up a deficiency arising in the blood. In the first instance, the symptoms which appear at first, gradually subside again, as the needed complement is slowly furnished by the tissues. This is true in the case of the mule, above referred to. In the second instance, when the tissues also are drained of their complement¹⁵

and an arising deficiency in the blood can no longer be made up, death ensues. This is true in the case of the highly immunized horse that succumbs to a small dose of toxins, a practical experience that has always been a great puzzle to antitoxinists. The complete drainage of the animal's body of complement is, in these instances, due to the long continued injections of toxins. Toxins are protein split products, that is, intermediary products of digestion. For their disintegration ferments need complement just as much as they need it for the killing and disintegration of living microbes. As a consequence, immunization always goes hand in hand with a loss of the natural complement. This loss is the greater, the longer toxins are injected, so that highly immunized horses are occasionally killed by a small dose of toxins because even the small quantity of complement needed to disintegrate the toxins into harmless end products can no longer be secured. The enormous number of available specific ferments, or antitoxins, can, then, no more protect the horse than an equal number of laborers can blow up stumps if they have no dynamite.

In the case of sickness, for instance in diphtheria, a complete exhaustion of complement comes on much more swiftly in consequence of the rapid killing and disintegration of the ever increasing number of bacilli. The universally advocated early administration of antiserum owes its acknowledged great value to the fact that the injected defensive ferments can begin to kill the relatively small number of invaders at a much earlier time, when a sufficient quantity of complement is still at hand. As the bacilli by their rapid multiplication increase the bulk of their collective body substance, and as with the increase of their collective body substance the quantity of complement needed for their killing and disintegration increases in proportion or, to be more to the point, as the quantity of complement available in the body of the ailing child relatively decreases in proportion as the bulk of the collective body substance of the microbes increases—the death warrant is signed as soon as the quantity of the specific foreign protein, represented by the bodies of the invaders, outbalances the relative quantity of complement available in the body of the child for the destruction and disintegration of the microbes. That under such conditions the injection of additional anti-

toxins is of no avail is self evident, as all ferments are inert without complement and the entire defensive mechanism of the child is paralyzed in consequence. It is at this juncture that the antitoxin theory through its misguided devotees strikes its fatal blows. As antitoxins are supposed to dispose of the toxins without the use of complement, thousands upon thousands of children are killed annually because antitoxinists ignorantly withhold the complement that would save them.

Comment. It would be a most unfortunate mistake to construe what has been said as meaning that antitoxins have no worth. It is only the wrong interpretation of their function that has been criticized. Behring's discovery of the fact that specific defensive ferments, called antitoxins, can be developed in the animal for ready use in the human body against the respective pathogenic organisms is, no doubt, of momentous importance to the human race. It is even of far greater importance than the medical fraternity at large does, and can, realize at present for the reason that, owing to the fatal influence of the antitoxin theory, the potential blessings to be derived from antitoxins are woefully curtailed. Ferments need complement to keep active. Without complement they are paralyzed. If, therefore, we inject ferments in the form of antisera without duly adding the needed complement, we can possibly save only a part of those children that can, and will, be saved if complement also is provided. Unless this is done, the slaughter, so insidiously effected by the antitoxinists, will increase by leaps and bounds with every newly developed antiserum. Thus, with the measles and scarlet fever antisera found, the children that die hereafter of measles or scarlet fever are equally the pitiful victims of the antitoxinists as are the doomed diphtheritic children of today and yesterday. They could practically all be saved if complement were administered with the ferments. But the damage done by the antitoxin theory extends still further. The deaths not only from these acute infectious diseases, but also from such chronic scourges as syphilis and tuberculosis, are in great part due to lack of complement. In the case of syphilis, it is true, we already possess in mercury, arsenic and bismuth fairly well working remedial complements,¹⁷ but we lack them entirely in tuberculosis. As the supply of ferments can be increased in any given case, either by

injecting antisera in acute cases or by stimulating the body to greater production in chronic cases—it is a supply of the different complements that is needed most for the cure and eradication of infectious diseases. It will lead us to therapeutic triumphs undreamed of in former days, as there are no means which can, or will, ever be developed by human scientific efforts that can possibly compare in strength and swiftness of action with Nature's own never failing and ever harmless remedy—ferment plus complement.

With this wonderful vista of possibilities before us, the most formidable obstacle in our way to success is the antitoxin theory. It is only over its grave that a realization of these brilliant prospects can be accomplished. The work, though, will be strenuous. It will take time and patience to dislodge from the mind of the medical profession a theory that still today holds sway unopposed and unrestricted. How difficult it will be to be successful can no better be illustrated than by relating the following memorable incidents: In an effort to make a beginning and to support words by deeds, I addressed Ludwig Hektoen, of the John McCormick Institute for Infectious Diseases, to grant me laboratory facilities with a view to find the antidiphtheritic complement and to save the now doomed victims of diphtheria. The reply was curt and negative. No hearing was granted. A similar result had the same request directed to the Rockefeller Institute for Medical Research. A third request, sent to the Council on Pharmacy and Chemistry of A. M. A., was answered from the office of the *Journal* of the American Medical Association by Simmons jokingly referring me to some commercial laboratories of Chicago. Nothing could show better the deplorable mental attitude of the antitoxinists than this ghastly joke on those tens of thousands of bereaved parents who lost their children since 1922 when I showed how to save them—a ghastly joke that is no less also on those parents who will lose their children hereafter as victims of the antitoxinists until these latter begin to see their fatal mistake and discard their silly theory.

From such men, therefore, as are "clothed with the responsibility of outlining medical policies"¹⁸ and who control the best laboratory facilities of this country and the main channels for the distribution of medical knowledge, little, if anything, can be expected in the way of correcting

that murderous mistake, the antitoxin theory. They should realize, however, that with the means known to save these victims, their death, as time goes on, more and more approaches murder, unless either my charges are disproved or the search for the needed complements is begun in earnest. But there is hope that the general practitioners of this country who, in the last analysis, must necessarily stand the blame for this monstrous fallacy, will not fail to force an authoritative investigation of the charges here preferred or, better, participate freely in the discussion that is absolutely necessary to clear the atmosphere. With the evidence here adduced intricate immunological knowledge is not necessary. All that is needed to pass judgment is an average amount of good common sense. Even a layman, without any medical knowledge, can readily see that Nature would mop the floor and let the faucet run if she would elaborate antitoxins that neutralize liberated toxins but do not "act directly on the infecting bacilli," thus allowing the faucet, as it were, to continue pouring forth a stream of new toxins. With the discussion forced, however, and the antitoxin theory together with its devotees brought to trial, the object of this treatise has been accomplished and the years of patient preparatory work devoted to this subject have not been sacrificed in vain.

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INTESTINAL TOXEMIA*

J. S. GROVE, M. D.

CHICAGO

In 1868 Senator put forth the idea that decomposition of proteins within the alimentary canal under ordinary conditions resulted in the formation of substances toxic to the host. This thought was passed up more or less casually until about twenty years later when Bouchard claimed that the amount of putrefactive products eliminated in the urine was a measure of the degree of intestinal putrefaction. This theory slowly gained a foothold until 1907 when Metchnikoff¹ wrote his "Prolongation of Life" in which he supported the belief that premature senescence was the result of toxins produced in the intestinal canal by harmful bacteria. He believed that a change in the intestinal flora if maintained would prevent premature aging of tissues and thereby prolong life. He employed the use of cultures of *B. Bulgaricus* to produce a change in the intestinal flora, and thus was the first one to stimulate work along this line. However, as was shown by the work of Herter and Kendall² in 1908 the *Bacillus Bulgaricus* cannot grow and be colonized in the intestinal canal. This fact has since been proven by numerous investigators. However, this idea gained some prominence, and led other men to try the use of various bacteria in order to change the intestinal flora. In 1920 Rettger and Cheplin³ working with the *Bacillus acidophilus* were able to definitely change the intestinal flora with this organism when suitable amounts were taken or when either lactose or dextrin were given with sufficient amounts of *B. acidophilus*.

Kendall and Haner⁴ state that germ-free alimentary tracts are impossible of realization, except under circumstances wholly beyond livable conditions and even temporary sterilization of intestinal contents is not feasible with any disinfectant known to medicine.

They further state that attempts to demonstrate viable *Bacilli Bulgaricus* in the feces of human subjects even after prolonged administration of milk soured by *Bacillus Bulgaricus* in pure culture have failed. Many varieties of pills, tablets and vials purporting to contain live and active cultures of *B. Bulgaricus* have been sold and are still being sold to the uninformed public.

It cannot be said that these preparations do harm, but they do little or no good.

Kendall and Haner⁴ state that the cardinal principles for Acidophilus therapy are: First, a microbic culture suitable for and acclimatized to the intestinal conditions in man. Second, a properly modified diet to reduce protein residua in the human alimentary canal to relatively small amounts, and a carbohydrate regimen so adjusted as to provide a continuous supply of this absolutely necessary type of foodstuff throughout the small and large intestine to at least the sigmoid flexure. Third, the absence of a contraindication to a carbohydrate rich diet. This last principle is important because there are many patients who are strongly susceptible to carbohydrates in that they have a good deal of gas formation after the ingestion of them.

Following the work of Metchnikoff in 1907, Combe wrote a book called "Intestinal Auto-Intoxication" in which he dealt at length with various products of intestinal putrefaction and their correction and elimination with various dietetic and medicinal measures. His ideas were mainly in harmony with those of Bouchard's. In 1910 Arbuthnot Lane promulgated the theory of "Chronic Intestinal Stasis"; attributing a great many disease entities as being results of intestinal stasis. His ideas gained a rapid and strong foothold with a great many of the medical profession; some men were very enthusiastic and attributed all ailments to stasis. On the other hand, there were many who did not believe that intestinal stasis *per se* existed but in a very small percentage of cases; among these advocates being Einhorn, Hurst, Bassler and Daniels.

Since Lane's work there have been a great many articles written pro and con and today, although the medical profession is not as enthusiastic as it was in 1910, still such a condition as intestinal toxemia undoubtedly exists.

Before taking up the clinical manifestations of intestinal toxemia I think it would not be amiss if we reviewed somewhat the physiological processes which take place in the gastro-intestinal tract and in this manner we will more clearly be able to understand the pathological processes leading to intestinal toxemia, these being manifestations of a perversion of the physiological processes.

As fats play an unimportant role in the determination of the types or the multiplication of the

*Read before the Irving Park Branch of the Chicago Medical Society, Dec. 17, 1925.

gastro-intestinal flora, and as they never initiate fermentation or putrefaction but may increase either, we will leave them out of the discussion. Carbohydrates in the form of starch when ingested are first acted on by the ptyalin in the saliva changing the starch to maltose and achroodextrin. Other polysaccharides or disaccharides are not acted upon until they reach the small intestine, where they are acted upon by the various enzymes and hydrolyzed to monosaccharides, this being necessary before the body can use the carbohydrate. In regards to the proteins they are first acted upon by the pepsin in the stomach being changed in part to proteoses and peptones. These are further acted upon by the trypsin in the duodenum and the erepsin in the small intestine, the final products being amino acids. As such they are absorbed into the blood stream and stored in the various organs of the body.

Now an examination of the small intestine in the region of the ileo-cecal valve shows that under normal conditions most of the protein has been absorbed before reaching this point. The process, however, is continued in the large intestine modified somewhat by bacterial action, and finally the amount that escapes absorption appears in the feces. Digestive and absorptive processes no doubt continue for a time in the large intestine since it contains undigested food along with various intestinal enzymes. Putrefaction takes place in an alkaline medium and is of normal occurrence in the large intestine. Under normal conditions on a mixed diet, it appears that in the small intestine carbohydrate fermentation with acids for its end products of digestion is the action of the bacteria, while in the large intestine protein putrefaction with the production of an alkaline reaction occurs. Pathologically through proteid digestion proteid end products may be produced that are toxic and when these are absorbed they can be the cause of marked constitutional symptoms.

There has been considerable discussion as to the conditions that restrain the protein putrefaction in the small intestine. Kendall⁵ has pointed out that as long as carbohydrate material is present the bacteria attack the carbohydrate and spare the protein, in addition as long as carbohydrates are present and undergoing fermentation the organic acids produced tend to neutralize the alkalinity of the intestinal

secretion and may even give an acid reaction; this being unfavorable to the activity of the bacteria which attack the proteins. This principal is put into use in the feeding of *B. acidophilus*. It has been shown by Rettger and Cheplin that lactose and dextrin are the two carbohydrates upon which *B. acidophilus* will grow most readily. Therefore in order to be successful with the feeding of *B. acidophilus* there should be a plentiful supply of carbohydrate in the colon at all times.

From this standpoint it would seem to follow that the nature of the bacterial activity in the small intestine will vary with the character of the diet and moreover that the diet may be chosen intentionally so as to favor one or the other kind of bacterial action. Although diet is considered one of the most important factors in altering the intestinal flora, other factors as pointed out by Dragstedt and others, are the degree of intestinal absorption, rate of intestinal secretion and the condition of motility.

The list of end products of putrefaction is a long one, but the ones to which greatest importance are attached are indol, skatol and phenol.

Many of the products of putrefaction are given off in the feces, while others are absorbed in part and excreted subsequently into the urine. In this latter connection especial interest attaches to the phenol, indol and skatol, as it was by a study of these substances in the urine that Bouchard first made scientific investigations of the subject of intestinal toxemia. Phenol after absorption is excreted in the urine in the form of an ethereal sulphate (Phenolsulphonic acid). Indol and skatol undergo oxidation to indoxyl and skatoxyl and are excreted in the urine in the form of indoxyl sulphuric acid and skatoxyl sulphuric acid. The amount to which these substances occur in the urine is, therefore, an indication of the extent of putrefaction in the large intestine.

The end products of fermentation consist of organic acids, the most common being lactic, acetic, formic, oxalic and hippuric acid. Oxalic acid heads this list in toxicity.

Having reviewed the physiology of the gastro-intestinal tract somewhat, we will now review some of the gastro-intestinal bacteriology and stool examination.

The examination of the stools deserves much more attention than it usually receives. Just as

the sputum is commonly limited to a search for the tubercle bacillus, so that of the feces is a matter of searching for parasites, ova and blood; so that much of value passes undiscovered. Normal stools consist of the undigested portion of food, bacteria, intestinal secretion, formed and unformed elements from the mucosa, salts and products of digestion. The amount per day varies widely with the diet, but a general average is from 120-250 grams. The bodies of bacteria, most of them dead, make up about one-third of the entire weight of the dried stools. The normal stool is usually alkaline in reaction. An examination of the feces of a healthy adult with the higher objectives of the microscope will show that a large portion of the fecal mass is made up of bacterial cells. It is realized that the ingested food does not contain this large number of bacteria, so that it must be assumed that there is a rapid development of the organisms in the intestinal tract. It is obvious therefore that the alimentary canal from the viewpoint of bacteriology is a most efficient incubator and cultural medium combined. The characteristic infantile intestinal flora appears on the third day post-partum; the dominant organism being the *B. bifidus*. In breast fed infants this organism remains the most important, while in artificially fed infants the *B. acidophilus* becomes the predominant organism. As adolescence comes on the general tendency in individuals on an average mixed diet is for *B. coli* to become the dominating organism. The characteristic feature of the normal adult fecal flora as compared with the infantile nursing flora is the very heterogeneous variety of types of bacteria in the former in sharp contrast to the homogeneity of types of bacteria in the latter.

The stomach in health is quite free from bacteria as a rule. The duodenum of adults is relatively poorly populated with bacteria in the interdigestive periods, the most common organism, however, during the digestive periods is the *Micrococcus ovalis*. According to Kendall and Haner⁶ this organism is presumably not a contributor to intestinal putrefaction. The lower levels of the small intestines become progressively richer in bacteria. As a rule cocci predominate in the lower jejunum and the upper ileum, but Gram neg. bacilli of the colon group appear in moderate numbers.

The cecum and ascending colon are the regions

of most intense bacterial proliferation in health, but the number of living bacteria in the intestinal contents diminishes rather abruptly from the sigmoid to the rectum. The bacteria commonly present in the ileo-cecal region are of many and varied types the colon-proteus and mesentericus groups being present.

The symptomatology induced from the products arising from the decomposition of proteins by the action of bacteria in the intestinal tract depends largely upon the organism or organisms concerned; it varies from the somewhat insidious slowly progressing, so-called auto-intoxication to the acute toxemia, such as typhoid fever.

The important factor from the viewpoint of this discussion is to realize that the formation of nitrogenous products from proteins which are being utilized by various types of intestinal bacteria for energy may be injurious to the host. These substances are of unknown composition for the most part, but are most likely nitrogenous products.

Since the bacteria which incite intestinal disturbances do not produce soluble toxins, anti-toxins cannot be prepared and likewise sera have been unsatisfactory. There is, therefore, little that can be accomplished serologically with present methods in the treatment of intestinal disturbances of bacterial action. There are two ways, however, in which direct influence may be applied to bacteria in the intestinal tract: 1, by a substitution of harmless types of organisms for abnormal types; this was illustrated above by the use of *B. acidophilus*; 2, by varying the diet of the host in such a manner that the intestinal contents at the desired level shall contain nutritive substances that may be reasonably expected to shift the metabolism of the offending organism. We are now able to enter into a clinical discussion of intestinal toxemia.

Combe defined intestinal auto-intoxication as a toxemia caused by qualitative or quantitative alterations in a normal digestion: this including the digestion brought about by the enzymes of the stomach and intestines and also by the action of the bacteria which thrive in the intestinal tract.

Lane in talking about chronic intestinal stasis defines the condition as such a delay of the contents of the intestines in some portion of the gastro-intestinal tract, but more particularly in the large bowel, as allows the absorption into the

circulation of a larger quantity of toxic material than can be dealt with effectually.

Hale White states that the term alimentary toxemia at once shows our ignorance, for it is unscientific to group cases of poisoning according to the point of entrance, they should be grouped according to the variety of the poison. Morgan⁷ states that auto-intoxication or true intestinal toxemia is of very rare occurrence. He further states that absorption of toxic substances from the small gut seldom if ever occurs; as stasis in that part of the gastro-intestinal tract is rare and is of short duration. Inasmuch as it is well known that absorption from the bowel can take place only in the presence of liquid contents and since the feces begins to harden in the ascending colon the only place where absorption might take place would be in the cecum. It is a well recognized fact that the cecum is very rarely the seat of chronic inflammation as occurs so frequently in the distal portions of the colon; hence, one of the necessary factors, namely a diseased mucosa is absent.

This last statement, however, is open to criticism since a diseased mucosa is not necessary; one can readily conceive whereby the toxins would be absorbed by the blood stream just as readily perhaps as the end products of carbohydrate and protein digestion.

Etiology.—A great number of predisposing factors have been mentioned amongst which are, gravitation, overwork, bad hygiene, improper food, continued use of laxatives and cathartics, severe pyorrhea, irregular and hurried meals, imperfect mastication of food, diminished secretion of free hydrochloric acid by the stomach, impaired secretion on the part of the pancreas and an excess of protein food. In addition the various bands and kinks described by Lane are supposed predisposing causes.

Billings⁸ states that the conditions which may promote infection of the gastro-intestinal tract are usually not brought to the attention of the physician until too late to use measures of prevention. Myriads of infectious bacteria are swallowed in infected food and in the muco-pus of the nose, throat and bronchi. These organisms to a great extent are destroyed by the gastric and intestinal juices but some under favorable conditions may continue to have or may attain pathogenic virulence and cause local or systemic disease.

As to the exciting factor or factors nothing definite is known although various theories have been advanced. The majority of investigators in this field believe that various nitrogenous products produced by bacterial putrefaction are the exciting factors.

Eustis⁹ states that first, the majority of these toxic substances are basic amines formed by the putrefaction of the several amino acids with the loss of carbon dioxide; second, that these putrefactive basic amines have definite physiological actions; third, that they are normally detoxicated by the liver and fourth, that when they are not detoxicated they exert their specific physiological action on the individual. Combe went one step further and stated that other detoxicating agents or lines of defense are the glands of internal secretion.

Many authors, on the other hand, assume that the products of bacterial action on carbohydrates are exciting factors in intestinal toxemia. As oxalic acid heads the list in the matter of toxicity, Lieb¹⁰ states that this acid when absorbed in small amounts produces definite toxic symptoms, and where positive oxalic acid reactions have been obtained the stool has invariably been that of a person with a chronically deranged metabolism.

Hale White sums up the matter by stating that just as we do not know the poison in uremia, so we do not know the poison in intestinal intoxication.

Symptoms.—Prior to the investigations of Lane, retarded passage of fecal current and the symptoms arising therefrom had been broadly covered by the term constipation and considered chiefly as a functional disorder affecting particularly the lower bowel. Lane, however, created an apparently new and important domain and invented the term, intestinal stasis. As yet, however, the subject has not come into a definite and accepted entity of ready and clear understanding.

The symptoms of auto-intoxication arising from stasis include: loss of fat, impaired circulation of the blood, offensive perspiration, staining of the skin, pain and weakness in the skeletal muscles, morning headaches, flatulence, foul breath, constipation and distension with colic at times. Besides these symptoms changes may occur in various organs of the body. Lane ascribing many diseases of the gall bladder, thyroid, pancreas and breasts to intestinal intoxication.

Jordan further states that duodenal and gastric ulcers are primarily caused by chronic intestinal stasis combined with either microbic or chemical changes. This statement is open to much question. One might but mention one fact, namely, that stasis is more common in women, and yet duodenal ulcer is more common in men.

Satterlee states that the most impressive symptoms of chronic intestinal toxemia are caused by early involvement of the nervous system; the gastro-intestinal symptom at first may be very slight.

Harris¹¹ stated that exophthalmic goiter is due to the excessive absorption of tryptophane from the intestines; this in turn is traceable to the absence of indole producers from the intestine. Absence of indican from the urine indicates the absence of indole producers from the intestine. On the other hand, diffuse parenchymatous goiter is characterized by an excess of indican in the urine. Eustis states that some cases of chronic intestinal toxemia may present symptoms of hyperthyroidism which are relieved by overcoming the intestinal toxemia.

In cases of stasis with toxemia much mucus is present in the stools. Sometimes there is so much secretion of mucus that the habitual constipation is marked by a spurious diarrhea, and the patient complains either of alternating attacks of constipation and diarrhea or of constant diarrhea.

Treatment.—Our knowledge of the processes of digestion and absorption in the normal state is now based upon well founded principles so that the existence of partial or complete failure in any one of the numerous steps can be deduced with considerable certainty by an examination of the stools.

As to the effectual treatment of intestinal toxemia numerous factors present themselves. First, maintenance of a protective intestinal flora by dietetic measures. Secondly, sufficient doses of *B. acidophilus*; thirdly, efficient non-surgical mechanical drainage of the colon as offered by the Schellberg treatment, and lastly removal of foci of infection.

A thorough trial of medical management is advisable before one considers the operation of removal of the entire colon as advocated by Lane.

In regard to dietetic measures it would be well to remember that a marked restriction in the dietary menu may lead to complications on an

avitamin basis. Crohn¹² recently reported two cases of ocular lesions like xerophthalmia occurring in patients with ulcerative colitis who had been on a very strict diet with an absence of fat soluble A. These cases promptly cleared up with the administration of substances rich in vitamin A.

In regards to acidophilus therapy one must always keep in mind to have the patient ingest sufficient quantities of either lactose or dextrin in order for the organism to flourish in the intestinal canal.

In closing I will repeat the words of Moynihan, who said: "I do not hesitate to say that the whole question of stasis and toxemia is one which will have to be considered by all of us, and be put to the proof. It cannot be dismissed with a shrug or a sneer for there is truth in the matter. Among much that is dross there lies a nugget of pure gold."

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ANAPHYLACTIC SHOCK AFTER THE INJECTION OF HORSE SERUM

In the *Journal des sciences médicales de Lille* (Nov. 8, 1925), Drs. David and Williate describe their observations in an unusual case of anaphylactic shock. The patient had been given a subcutaneous injection of 10 cc. of fresh horse serum (in the form of antitetanic serum, which happened to be on hand) for the purpose of arresting a menorrhagia which had existed for eight days and was assuming serious proportions. Less than a minute after the injection, the patient became suddenly pale, complained of a feeling of extreme anxiety, then the face became livid and leaden. The respiratory difficulty became marked, the pulse was much accelerated and of bad quality. On insistent questioning, the mother of the patient finally remembered that her daughter had received an injection of antidiphtheric serum nineteen years previously.

Intravenous injections of adrenalin solution (1:1000), in doses of $\frac{1}{2}$ cc. each, were given, and repeated at intermissions of a few minutes; also intramuscular injections of comphorated oil. After about forty-five

minutes, a temporary relaxation supervened, but again the condition became greatly aggravated. The pulse was imperceptible, and severe and uncontrollable vomiting appeared, followed by diarrhea. Generalized urticaria developed, which was almost confluent. The extreme depression, giving rise to frequent attacks of syncope, was alarming. Adrenalin solution was then repeated in large doses, one cc. being given every three hours, subcutaneously. Ouabain was given intravenously and was alternated with injections of caffeine, and of camphorated oil. After the first injection of adrenalin, the patient went into syncope, and death seemed imminent. During the whole night death was expected every moment, but finally the radial pulse once more became perceptible, and the vomiting ceased. However, the patient did not regain consciousness until the second day. After forty-eight hours, the urticaria disappeared.

In *La Presse médicale* (No. 15, 1925) a fatal case is described concerning a child in whom death followed a few minutes after the first injection of antitetanic serum, which had been made for prophylactic purposes, because the appearance of a wound was alarming. This girl had never received injections of any serum whatever. She had never eaten uncooked horse flesh, she was neither asthmatic nor subject to urticaria, she did not show signs of status lymphaticus, nor had she ever been subject to convulsions. However, her weight suggested a marked neuropathic heredity.

In this case, it could not be a question of acquired anaphylaxis, and yet, because of the resemblance presented by the case, the cause of death must be considered analogous to that which occurs in anaphylaxis.

These observations correspond to those symptoms that sometimes are very alarming, and which are observed in colloidotherapy by intravenous injection, and that also may follow intravenous injections of arsenobenzol. It seems probable that all these accidents of shock are due to a physical phenomenon—the formation of a precipitate, a flocculation of the blood serum, as it has been described by Lumière.

Until it is possible to determine in advance that the tissue-fluids of a certain patient are compatible with a therapeutic serum, it is safe, for the purpose of preventing such alarming and calamitous occurrences, to follow a method, when injecting a foreign protein, which has been proved very useful in patients in whom repeated injections of a therapeutic serum are called for. We refer to the method introduced by Besredka. One cc. of serum is suspended in 20 cc. of saline solution. Of this, one-fifth cc. is injected and, every ten minutes, injections of $\frac{1}{2}$, 1, 2, 5, and 10 cc. of the mixture are given. Then 1 cc. of the undiluted serum is given and finally the total quantity of the dose that is to be administered.

[As far as we recall, the method originally suggested by Besredka was, to inject a minute quantity of this serum, say 1 minim, and wait one-half hour before the balance of the foreign protein solution was injected. We have employed the method in this manner repeatedly in patients who had previously suffered distress-

ing anaphylactic symptoms, and thereby avoided all unpleasant disturbances.—Ed.]

This precaution is recommended in patients who are subject to urticaria, migraine, gout, or asthma; also in patients whose parents are subject to these afflictions; in patients with a neuropathic heredity, or in those patients concerning whom but little or nothing is known.

Sometimes, unpleasant, and even serious symptoms follow injections of foreign proteins—not immediately but after longer or shorter periods of time. In these cases, alkalies may be administered with good effects.—*The Endocrine Survey*.

Society Proceedings

ADAMS COUNTY

July 12, 1926. The meeting was held at the Quincy Elks' Club and in the absence of the president, first vice-president and second vice-president, Dr. John A. Koch was elected to preside for the evening. Twenty members and one guest were present.

A report of the special committee that had been appointed to investigate the charge to be made for physical examinations of school children sponsored by the Women's Luncheon Clubs of Quincy was read. This report was to the effect that a flat fee of \$2.00 per examination be made to these children. The secretary presented bills to the amount of \$5.90 and they were ordered paid. The secretary read a communication from the secretary of the A. M. A. to the effect that the House of Delegates of the A. M. A. at the Dallas meeting had recommended that in case of an emergency disaster that the President of the County Medical Society assume charge of local medical relief until such other relief could be arranged. After some discussion it was moved that this matter be referred to the Public Health Committee for further investigation and reported. Seconded and carried. The Secretary made a motion that the August meeting be turned over to our annual picnic to be held sometime during the regular week that the society meets and that full arrangements for this meeting be placed in the hands of the Entertainment Committee, Dr. Grant Irwin, chairman. Seconded and carried. Dr. A. H. Bitter made a motion that the dentists be invited to participate with us at the picnic. Seconded and carried. The Board of Censors reported favorably on the application of Dr. J. Frank Wilson of Versailles for membership in the society. Tellers were appointed, ballots cast and as the result Dr. Wilson was unanimously elected to membership in the society.

In the absence of the regular speaker who was to address the society, Dr. Harold Swanberg read a paper on "The Use of Radium in Uterine Hemorrhage and Fibroids." This paper was discussed by Drs. Montgomery, Miller, Cohen, Bitter, Williams and finally closed by Dr. Swanberg. Dr. H. S. Maupin read a case report of a child's malady and Dr. Hart Litchfield reported a case of a hairpin being found in the intestine at operation in a case simulating appendicitis.

These reports were discussed by Drs. Williams, Montgomery and Irwin.

The meeting adjourned about 10:00 p. m.

HAROLD SWANBERG, Secretary.

KANKAKEE COUNTY

The June meeting of the Kankakee County Medical Society was held June 17, 1926, at the Kankakee Country Club, to which the members' wives, together with the doctors and their wives of Iroquois and Ford counties were invited. The meeting was presided over by the president, Dr. N. T. Stevens, Clifton. The afternoon was enjoyed with golf and cards.

At 6:30 o'clock a sumptuous banquet was served, which was followed by an enjoyable entertainment consisting of music by the Clifton Trio, which was excellent, also a number of readings by A. A. Raboin, which were enjoyed by everyone present.

At the conclusion of the program dancing was the diversion of the remainder of the evening. Vic's orchestra furnished the music.

All reported a fine time. There was a large attendance of physicians and their families.

H. E. DELAVERGNE, Secretary.

MARION COUNTY

As has been the custom for years the Marion County Medical Society met July 23, 1926, at what was formerly Rainey's Lake, near Salem, Ill. In transferring the ground to the Salem Country Club, Dr. Geo. Rainey, long a very prominent surgeon of southern Illinois, made the provision that the doctors of Marion County have the privilege of meeting there twice a year for picnics and regular meetings. The Salem Country Club have greatly enhanced the natural beauties present and purchased additional ground for a splendid nine hole golf course. The doctors of Salem and members of the Country Club saw to it that all who wished had an opportunity to play golf, fish or swim. The children especially enjoyed the water. At noon a basket dinner was served by the doctor's wives, and was enjoyed by all. After feasting we went into the club house and the meeting was called to order by the president, Dr. H. D. Gillett of Centralia. We were very fortunate to have with us Dr. Mather Pfeifferberger of Alton, president of the Illinois State Medical Society, who read a paper on "Cholelithiasis and Cholecystitis" which was very instructive and enjoyed by everyone. The discussion by Dr. Buckmaster of Effingham was handled in his usual masterful way. We were next entertained with some fine music by two children of Dr. and Mrs. Carrigan of Sandoval. As we were about to adjourn it was proposed that we invite the ladies to form an auxiliary to our County Society. The meeting was then adjourned, some to play golf, some to fish and some to conversation and cigars. The ladies immediately took possession and proceeded to form an auxiliary. Mrs. W. N. Hamilton, Odin, being chosen president; Mrs. W. L. Finn, Iuka, vice-president, and Mrs. S. D. Carrigan, Sandoval, secretary-treasurer. Very soon thereafter they were around soliciting a contribution and now they have an organization with money in the treasury. We

believe the auxiliary will be a help to us all, socially and in a business way. All of these ladies vote and talk, and votes speak very loud. We also believe in unity there is strength.

Our belief in unity is so strong that we have organized a Four County Medical Society comprising the counties of Clay, Clinton, Effingham and Marion, with committees from each county to watch adverse legislation and keep the doctors of said counties informed as to standing of candidates and obnoxious bills in the State Legislature.

W. N. HAMILTON, Secretary.

PIKE COUNTY

The Pike County Medical Society met at Pittsfield April 22, 1926. After dinner at Koepping's the members and visiting brothers repaired to the Lions Club room for the meeting. The matter of a memorial to the memory of Drs. John T. Hodgen and Henry Mudd was taken up. Both of these men who attained eminence in the profession were in their earlier lives residents of Pittsfield, and a movement has been started to erect some sort of appropriate memorial to them in the town of their boyhood and early experience in professional life. Dr. Carl Black of Jacksonville was present and spoke on the subject, as did several members of the Pike County Society. It was moved by Dr. W. E. Shastid, and the motion carried, that Drs. S. B. Peacock, F. N. Wells and S. L. Smith be a committee to investigate the matter of procuring a bronze tablet for a memorial and report to the next meeting.

In the election of officers for the coming year Dr. P. N. Chiasson of Griggsville was elected president and Dr. O. H. Berry of New Canton, vice-president.

Dr. W. E. Shastid of Pittsfield, who has for the past 12 years been our very efficient secretary-treasurer, announced he would not be a candidate for that office. Dr. Shastid stated that he had missed but four meetings in the twelve years, and those because he was abroad when they occurred.

Dr. F. N. Wells of Pittsfield was elected secretary-treasurer. The Society unanimously voted their appreciation of Dr. Shastid's untiring and efficient service during the past twelve years.

Dr. Chiasson, the new president, read a paper on and exhibited an ingenious device for the treatment of flat-foot.

Dr. L. S. Lacy gave a very interesting paper on influenza and some of its symptoms and complications.

Meeting July 22, 1926

The Pike County Medical Society met at Griggsville July 22, and after dinner at the hotel repaired to the public library for the meeting. A vote was taken favoring a clinic for pre-school-age children, as was also a vote favoring the holding of a tuberculosis clinic.

Dr. Swanberg extended the invitation of the Adams County Society to their annual picnic, to be held in the near future.

The A. M. A. plan for immediate organized medical relief in disaster was adopted by vote of the Society.

The matter of the Hodgen-Mudd memorial was brought to the attention of the Society by the committee, and as they were not ready with a complete report it was decided to continue the committee and that they be asked to make a complete report at the next meeting.

Dr. Frank Garm Norbury of Jacksonville read an interesting and instructive paper on "Encephalitis," bringing out a very clear disease picture, and the differential diagnostic points as well.

Dr. Ellsworth Black of Jacksonville read an excellent paper on "Renal Function," dwelling especially upon the importance of its consideration in surgical cases. This paper was quite fully discussed by Drs. Miller and Pollock of Quincy.

Dr. L. S. Lacy of Pittsfield then spoke on the advisability of having a Pike County tuberculosis sanitarium, taking a strong stand for it. The question was discussed by Drs. Kuntz and Chiasson of the Society, and by Dr. Newcomb, who is in charge of the Morgan County Sanitarium at Jacksonville, but the Society as such did not decide the question.

Dr. F. N. Wells read a paper on "Military Medicine" which was well received.

The next meeting will be at Barry October 28. All visiting brothers will be welcome. We had a very good attendance at this meeting, and many visitors from our neighboring societies, especially from Quincy, Jacksonville and Liberty.

F. N. WELLS, Secretary.

Marriages

HENRY REX AMBERSON to Miss Nelle Davern, both of Chicago, at Crown Point, Ind., May 6.

LOUIS C. ARP, Moline, Ill., to Miss Eleanor M. Harned of Davenport, Iowa, June 24.

ZOLTAN GLATTER, Dixon, Ill., to Miss Magda Fejer of Hungary, at New York, June 25.

WILLIAM L. HANSON, East St. Louis, Ill., to Miss Mildred Champion of Granite City, June 29.

DON B. STEWART, Zeigler, Ill., to Miss Helen Perry of Mount Vernon, at Louisville, Ky., June 23.

LEON W. KELSO, Carlinville, Ill., to Miss Bonnie Woods of Jacksonville, June 4.

Personals

Dr. Frank P. Norbury, Jacksonville, addressed the Decatur Medical Society, recently, on "Epidemic Encephalitis."

Dr. Arthur M. Aszmann, East St. Louis, has been elected a director of the Illinois Trapshoot Association.

Dr. Stephen R. Pietrowicz has been elected chief of staff of St. Mary of Nazareth Hospital, succeeding the late Dr. Albert J. Ochsner; Dr. George Mueller has been elected surgeon-in-chief.

Dr. Franklin H. Martin received the honorary degree of doctor of public health at the recent graduating exercises of Detroit College of Medicine and Surgery, Detroit.

Dr. Albert F. Storke has been elected president of the Oak Park Physicians Club to succeed Dr. Anna E. Blount; Dr. Hugh T. Patrick, Chicago, recently addressed the club on "The Expert Witness."

Dr. Mabel M. Matthies has been elected president of the Chicago Women's Medical Club; Dr. Gertrude F. Thompson and Dr. Anny M. Saunders, vice presidents; Dr. Minnie Jahp, secretary; Dr. Goldye L. Hoffman, treasurer, and Dr. Sadie B. Adair, editor.

Dr. Casey A. Wood has spent a year in Ceylon collecting material on comparative vision in birds and has now gone to Kashmir to continue this study for six months, when he will return to Chicago by way of China and the Philippine Islands; Dr. Wood has been made honorary collaborator in the Division of Birds, Smithsonian Institution, Washington, D. C., for his contributions to ornithology.

Frederick B. Noyes, D.D.S., professor and head of the department of orthodontia, has been appointed dean of the College of Dentistry of the University of Illinois to succeed Dr. Frederick B. Moorehead, resigned; Dr. Frederick W. Maroney, former director, department of health instruction of public schools, Atlantic City, N. J., has been appointed associate professor of physical education, and Edward A. Boyden, Ph.D., associate professor of anatomy.

Dr. J. Clarence Webster, Shediac, N. B., formerly professor and head of the department of obstetrics and gynecology at Rush Medical College, received the honorary degree of doctor of laws at the recent commencement exercises of Dalhousie University, in recognition, the *Canadian Medical Association Journal* says, of his work in forwarding the interests of education and of his research in the history of the maritime provinces. Dr. Webster was invited to deliver the principal address at the commencement exercises.

News Notes

—A drive has been started to raise \$75,000 for a community hospital in Libertyville.

—The new 300-bed hospital building for St. Mary's Hospital, East St. Louis, was expected to be ready for occupancy July 1.

—The old building at the southeast corner of Wabash and Lake is now being torn down to make way for the new medical and dental arts building, which will be ready for occupancy, May 1, 1927.

—The Illinois Central Hospital is to build an additional wing of fifty beds, which will make the total capacity of the hospital 250, and provide additional space for laboratories; the main building was opened in 1916, and a wing was constructed in 1922.

—There has been established throughout the city a new type of nursing service to meet the demand for skilled care of the sick in homes where a nurse is not required full time. A nurse may now be engaged in Chicago by the hour between 8:30 a. m. and 10 p. m. at \$2 for the first hour or fraction thereof, and \$1 for the second hour or fraction thereof, the service being limited to three hours per visit. The Central Council for Nursing Education and the First District of the Illinois State Association of Graduate Nurses organized the service; calls should be made to the Chicago Nurses Club and Registry, 116 South Michigan Avenue, telephone State 8542.

—In the annual report of the secretary it appears that the Chicago Medical Society now has a membership of more than 4,000, and is the largest local medical society in the world. During the last year, the central society conducted twenty-five meetings, which were addressed by eighteen out-of-town guests in addition to members of the society. The council of the society held nine meetings, and the board of trustees eight, during the year. A campaign was carried on in every branch of the society for new members; seventy-eight members were dropped during the year for nonpayment of dues, the smallest number in several years; twenty-six transfers were issued to other county societies, and forty-nine of the members died.

—The first four weeks' course of summer clinics at Cook County Hospital, conducted

under the auspices of the Chicago Medical Society, was officially opened, July 19, by Mr. Anton J. Cermak, president of the county board, who welcomed about 300 visiting physicians, among whom are ten women. The class in the wards was divided into groups of fifteen each; there followed a pathologic conference of the whole group in the amphitheater and a symposium Tuesday evening on goiter by Drs. Frederick Tice, Edward S. Blaine and Raymond W. McNealy, and on Friday evening a symposium on gastric and duodenal ulcer by Drs. William A. Brams and Karl A. Meyer; about sixty physicians on the staff of the hospital will assist in the instruction.

—Representatives of the Illinois State Medical Society, the state department of public health, the Illinois Tuberculosis and Public Health Association, the Illinois State Association of Graduate Nurses, the Illinois Society for Prevention of Blindness, the Chicago Heart Association and the Illinois Society for Mental Hygiene met in Chicago, June 14, and after a full discussion passed a motion that the organizations and their representatives present constitute the temporary organization of a state health council. A committee on principles, procedure and by-laws, consisting of the authorized representatives present at this meeting, was named and Dr. Jacob C. Krafft was elected chairman. The council will meet in Chicago, September 20, to receive the report of the committee. Other state organizations were invited to be present at the organization meeting. J. W. Becker was elected chairman, and Dr. Grace S. Wightman, secretary, of the temporary organization.

—The next examination given by the American Board of Otolaryngology will be held in Denver, Colorado, at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

—The Chicago (Mu) Chapter of the Alpha Mu Pi Omega Medical Fraternity, the oldest medical fraternity in the country, was organized and its officers installed under the auspices of the officers of the Grand Chapter of Milwaukee, at a live meeting held at the new Palmer House

on Saturday evening, July 10. A dinner was given the guests immediately after the ceremonies. The officers of the new chapter are: President, Dr. W. A. Newman Dorland; Vice-President, Dr. F. L. B. Jenney; Secretary, Dr. Roe J. Maier; Treasurer, Dr. P. J. Sarma. The charter members of the chapter are Drs. W. A. Newman Dorland, Arthur M. Corwin, Henry Foster Lewis, W. Moore Thompson, P. Joseph Sarma, Chester Henry Keogh, Otto A. Kreml, M. J. Hubeny, B. C. Cushway, Roe J. Maier, J. Rawson Pennington, U. G. Darling, William Hamlin Wilder, F. L. B. Jenney, M. J. Latimer, E. K. Houchins, Elzear La Mothe, Walter T. Venn, Henry French Goodwin, William McIlvaine Thompson, William W. Meloy, Melbourne Mabee, A. J. McCarter, Lee Alexander Stone, William H. Gehl and William R. Campbell.

—The Illinois Federation of Women's Clubs, through its chairman of Public Health and Hygiene, Dr. Lena K. Sadler, has outlined an ambitious program of club activities for the year 1926-27. Recognizing that some clubs will be more interested in public health, and others in child welfare, the program provides plenty of subjects for both activities: 1, promotion of plan for saving mothers and babies in your county; 2, promotion of plan for pre-school child examinations; 3, promotion of medical inspection of school children; 4, promotion of dental inspection of school children; 5, no diphtheria; 6, health audits; 7, digest of health laws. A circular carrying the suggestions above mentioned with additional details was published in the *Illinois Clubwoman's World*. The chairman is sanguine of success in club activities, and states that "Illinois stands alone in achievement possibilities, because of the unusual co-operation of four great agencies in the State—the Federated Clubs, the Illinois State Medical Society, the Illinois State Dental Society and the Illinois State Department of Public Health."

Deaths

EDWARD C. ALLWORTH, London Mills, Ill.; Jenner Medical College, Chicago, 1898; aged 68; died, June 13, of carcinoma of the throat.

GEORGE CHENEY BLISH, Galena, Ill.; Chicago Medical College, 1881; died, July 4, of heart disease.

JOHN B. CARY, Donnellson, Ill. (licensed, Illinois, 1878); aged 82; died, June 5, of cerebral hemorrhage.

CARL FRISCHKORN, Oak Park, Ill.; Hahnemann Med-

ical College and Hospital, Chicago, 1891; aged 80; died, May 1.

CLARENCE GILBERT GOODWIN, Chicago; Northwestern University Medical School, Chicago, 1903; member of the Illinois State Medical Society; aged 56; died, June 28, of cerebral hemorrhage.

SARA C. HALL, Elgin, Ill.; Woman's Medical College of Pennsylvania, Philadelphia, 1870; formerly on the staff of the Mercy Hospital, Fort Scott, Kan.; aged 91; died, May 30, of hypostatic pneumonia and senility.

GEORGE FRANKLIN HILTON, St. Augustine, Ill.; College of Physicians and Surgeons, Keokuk, 1879; a Fellow, A. M. A.; aged 70; died, June 3, following a long illness.

ELISHA I. HOOK, Chicago; Rush Medical College, Chicago, 1889; a Fellow, A. M. A.; aged 67; died May 25, at Mobile, Ala., of arterio-sclerosis.

JOSEPH M. HUBER, Chicago; Hahnemann Medical College and Hospital, Chicago, 1906; aged 50; died, June 10, of chronic nephritis and uremia.

ROBERT M. LITTLE, East St. Louis, Ill.; Washington University Medical School, St. Louis, 1899; aged 60; died, May 25, of myocarditis.

H. HORACE LONG, Orion, Ill.; Jefferson Medical College of Philadelphia, 1868; aged 85; died, June 6.

CHARLES R. OATMAN, Collinsville, Ill.; St. Louis Medical College, 1871; aged 80; died, June 29, of heart disease and senility.

THOMAS J. OSBURN, Stonefort, Ill. (licensed, Illinois, 1877); aged 86; died, May 28.

JOSEPH HERCULE ROY, Kankakee, Ill.; University of Montreal Medical Faculty, Montreal, Que., Canada, 1886; a Fellow, A. M. M.; aged 65; died, June 15, at the Mercy Hospital, Chicago, following an operation for carcinoma.

ELIZA H. ROOT, Sycamore, Ill.; Northwestern University Woman's Medical School, Chicago, 1882; member of the Illinois State Medical Society; formerly on the faculty of her alma mater; at one time on the staffs of the Women and Children's Hospital and the Wesley Memorial Hospital, Chicago; aged 80; died, June 12, of carcinoma.

CHARLES H. DUNN, Cherry, Ill.; Chicago College of Medicine and Surgery, 1909; aged 52; died, June 21, at St. Margaret's Hospital, Spring Valley, of streptococcal septicemia, following an abrasion of the upper lip.

JOHN HALL GERSON, Kankakee, Ill.; Rush Medical College, Chicago, 1872; member of the Illinois State Medical Society; aged 75; died, June 19, of heart disease.

HARRY EUGENE KERCH, Dundee, Ill.; Chicago Homeopathic Medical College, 1892; a Fellow, A. M. A.; aged 58; died, June 27, of cerebral hemorrhage.

WILLIAM D. MORGAN, Charleston, Ill.; Chicago Medical College, 1879; aged 70; died, April 15, of heart disease.

JAMES P. PRESTLEY, Newton, Ill.; Rush Medical College, Chicago, 1886; a Fellow, A. M. A., president and formerly secretary of the Jasper County Medical Society; aged 65; died, June 20, of uremia.

Illinois Medical Journal

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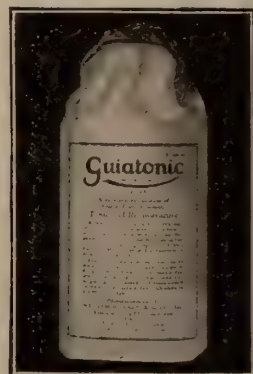


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ILLINOIS MEDICAL JOURNAL

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Editorial

THE ATTEMPT TO REVIVE THE MATERNITY ACT

Maternity legislation is not a dead issue. An attempt is being made to revive interest in legislation at the next session of Congress to reappropriate and thus extend the maternity act for a period of two years. The country is flooded with propaganda from the Children's Bureau at Washington intended to bolster up waning interest in the maternity act. Propaganda sent out is made up of the most bare-faced falsehoods imaginable. We have before us much of the literature sent by the Children's Bureau. Some of the documents have not one particle of truth in them. The entire campaign from first to last has been one of deceit, misrepresentation and jugglery of facts done by past masters in the art of misrepresentation.

We feel sorry for the high minded women of the country who have been led by misrepresentation to lend their influence to this propaganda by a coterie of political job-hunting, tight-rope-walkers and political milkmaids and representatives of Russian communism and extreme socialism.

In this and in succeeding issues of the JOURNAL we will reproduce practically all the facts connected with the campaign to put over the maternity act. We ask our readers to follow carefully the expose. The information that will be published in the JOURNAL will be found useful as a basis for the assembling of data for talks by physicians and others before Rotary, Kiwanis and other clubs.

THE FULL TEXT OF THE "MATERNITY ACT"

(Editor's Note)

We publish the maternity act in full as a matter of information and convenience. In the past we have been repeatedly asked for copies of the Maternity Act, by physicians and students of the subject seeking first hand information. Requests for copies have been

numerous. Below we publish the law in full. We ask members of the profession to preserve this copy for future use. Effort will be made at the next session of the Illinois Legislature to pass an act to co-operate with the National Maternity Law on a fifty-fifty basis. Attempt to enact such legislation in Illinois will be bitterly contested. We expect co-operation from every physician of the State Medical Society to defeat this and similar unAmerican and menacing legislation.

Again we ask the doctors to save the copies of the JOURNAL containing the original law and comments pertaining thereto. Data published in the JOURNAL on Maternity Legislation will be of great aid to members of the profession in preparing talks before clubs and in arguments before members of the legislature from respective districts.

FULL TEXT OF "MATERNITY ACT"

[Public 97—67th Congress; 42 Stat. 135]

AN ACT FOR THE PROMOTION OF THE WELFARE AND HYGIENE OF MATERNITY AND INFANCY, AND FOR OTHER PURPOSES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated annually, out of any money in the Treasury not otherwise appropriated, the sums specified in section 2 of this Act, to be paid to the several States for the purpose of cooperating with them in promoting the welfare and hygiene of maternity and infancy as hereinafter provided.

SEC. 2. For the purpose of carrying out the provisions of this Act, there is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the current fiscal year \$480,000 to be equally apportioned among the several States, and for each subsequent year, for the period of five years, \$240,000, to be equally apportioned among the several States in the manner hereinafter provided: *Provided*, That there is hereby authorized to be appropriated for the use of the States, subject to the provisions of this Act, for the fiscal year ending June 30, 1922, an additional sum of \$1,000,000, and annually thereafter, for the period of five years, an additional sum not to exceed \$1,000,000: *Provided further*, That the additional appropriations herein authorized shall be apportioned \$5,000 to each State and the balance among the States in the proportion which their population bears to the total population of the States of the United States, according to the last preceding United States census: *And provided*

further, That no payment out of the additional appropriation herein authorized shall be made in any year to any State until an equal sum has been appropriated for that year by the legislature of such State for the maintenance of the services and facilities provided for in this Act.

So much of the amount apportioned to any State for any fiscal year as remains unpaid to such State at the close thereof shall be available for expenditures in that State until the close of the succeeding fiscal year.

SEC. 3. There is hereby created a Board of Maternity and Infant Hygiene, which shall consist of the Chief of the Children's Bureau, the Surgeon General of the United States Public Health Service, and the United States Commissioner of Education, and which is hereafter designated in this Act as the Board. The Board shall elect its own chairman and perform the duties provided for in this Act.

The Children's Bureau of the Department of Labor shall be charged with the administration of this Act, except as herein otherwise provided, and the Chief of the Children's Bureau shall be the executive officer. It shall be the duty of the Children's Bureau to make or cause to be made such studies, investigations, and reports as will promote the efficient administration of this Act.

SEC. 4. In order to secure the benefits of the appropriations authorized in section 2 of this Act, any State shall, through the legislative authority thereof, accept the provisions of this Act and designate or authorize the creation of a State agency with which the Children's Bureau shall have all necessary powers to cooperate as herein provided in the administration of the provisions of this Act: *Provided*, That in any State having a child-welfare or child-hygiene division in its State agency of health, the said State agency of health shall administer the provisions of this Act through such divisions. If the legislature of any State has not made provision for accepting the provisions of this Act, the governor of such State may in so far as he is authorized to do so by the laws of such State accept the provisions of this Act and designate or create a State agency to cooperate with the Children's Bureau until six months after the adjournment of the first regular session of the legislature in such State following the passage of this Act.

SEC. 5. So much, not to exceed 5 per centum,

of the additional appropriations authorized for any fiscal year under section 2 of this Act, as the Children's Bureau may estimate to be necessary for administering the provisions of this Act, as herein provided, shall be deducted for that purpose, to be available until expended.

SEC. 6. Out of the amounts authorized under section 5 of this Act the Children's Bureau is authorized to employ such assistants, clerks, and other persons in the District of Columbia and elsewhere, to be taken from the eligible lists of the Civil Service Commission, and to purchase such supplies, material, equipment, office fixtures, and apparatus, and to incur such travel and other expenses as it may deem necessary for carrying out the purposes of this Act.

SEC. 7. Within sixty days after any appropriation authorized by this Act has been made, the Children's Bureau shall make the appointment herein provided for and shall certify to the Secretary of the Treasury the amount estimated by the bureau to be necessary for administering the provisions of this Act, and shall certify to the Secretary of the Treasury and to the treasurers of the various States the amount which has been apportioned to each State for the fiscal year for which such appropriation has been made.

SEC. 8. Any State desiring to receive the benefits of this Act shall, by its agency described in section 4, submit to the Children's Bureau detailed plans for carrying out the provisions of this Act within such State, which plans shall be subject to the approval of the board: *Provided*, That the plan of the States under this Act shall provide that no official or agent, or representative in carrying out the provisions of this Act shall enter any home or take charge of any child over the objection of the parents, or either of them, or the person standing in loco parentis or having custody of such child. If these plans shall be in conformity with the provisions of this Act and reasonably appropriate and adequate to carry out its purposes they shall be approved by the board and due notice of such approval shall be sent to the State agency by the chief of the Children's Bureau.

SEC. 9. No official, agent, or representative of the Children's Bureau shall by virtue of this Act have any right to enter any home over the objection of the owner thereof, or to take charge of any child over the objection of the parents, or either of them, or of the person standing in loco

parentis or having custody of such child. Nothing in this act shall be construed as limiting the power of a parent or guardian or person standing in loco parentis to determine what treatment or correction shall be provided for a child or the agency or agencies to be employed for such purpose.

SEC. 10. Within sixty days after any appropriation authorized by this Act has been made, and as often thereafter while such appropriation remains unexpended as changed conditions may warrant, the Children's Bureau shall ascertain the amounts that have been appropriated by the legislatures of the several States accepting the provisions of this Act and shall certify to the Secretary of the Treasury the amount to which each state is entitled under the provisions of this Act. Such certificate shall state (1) that the State has, through its legislative authority, accepted the provisions of this Act and designated or authorized the creation of an agency to cooperate with the Children's Bureau, or that the State has otherwise accepted this Act, as provided in section 4 hereof; (2) the fact that the proper agency of the State has submitted to the Children's Bureau detailed plans for carrying out the provisions of this Act, and that such plans have been approved by the board; (3) the amount, if any, that has been appropriated in the legislature of the State for the maintenance of the services and facilities of this Act, as provided in section 2 hereof; and (4) the amount to which the State is entitled under the provisions of this Act. Such certificate, when in conformity with the provisions hereof, shall, until revoked as provided in section 12 hereof, be sufficient authority to the Secretary of the Treasury to make payment to the State in accordance therewith.

SEC. 11. Each State agency cooperating with the Children's Bureau under this Act shall make such reports concerning its operations and expenditures as shall be prescribed or requested by the bureau. The Children's Bureau may, with the approval of the board, and shall, upon request of a majority of the board, withhold any further certificate provided for in section 10 hereof whenever it shall be determined as to any State that the agency thereof has not properly expended money paid to it or the moneys herein required to be appropriated by such State for the purposes and in accordance with the provi-

sions of this Act. Such certificate may be withheld until such time or upon such conditions as the Children's Bureau, with the approval of the board, may determine; when so withheld the State agency may appeal to the President of the United States, who may either affirm or reverse the action of the Bureau with such directions as he shall consider proper: *Provided*, That before any such certificate shall be withheld from any State, the chairman of the board shall give notice in writing to the authority designated to represent the State, stating specifically wherein said State has failed to comply with the provisions of this Act.

SEC. 12. No portion of any moneys apportioned under this Act for the benefit of the States shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings or equipment, or for the purchase or rental of any buildings or lands, nor shall any such money or moneys required to be apportioned by any State for the purposes and in accordance with the provisions of this Act be used for the payment of any maternity or infancy pension, stipend, or gratuity.

SEC. 13. The Children's Bureau shall perform the duties assigned to it by this Act under the supervision of the Secretary of Labor, and he shall include in his annual report to Congress a full account of the administration of this Act and expenditures of the moneys herein authorized.

SEC. 14. This Act shall be construed as intending to secure to the various States control of the administration of this Act within their respective States, subject only to the provisions and purposes of this Act.

Approved November 23, 1921.

SPONSORS OF THE MATERNITY ACT
MORE INTERESTED IN THE CAPTURE
OF POWER FOR THE CHILDREN'S BU-
REAU THAN IN THE HEALTH OF
MOTHERS AND BABIES.

MATERNITY BACKERS TELL CONGRESS-
MEN THAT MATERNITY LEGISLATION
IS NOT WANTED UNLESS IT CAN BE
ADMINISTERED BY THE CHILDREN'S
BUREAU.

LEGISLATORS TOLD THAT TO HAVE

ACT ADMINISTERED BY THE U. S.
PUBLIC HEALTH SERVICE WOULD BE
A FATAL ERROR.

U. S. PUBLIC HEALTH SERVICE HAS
NEVER BEGGED CONGRESS TO BRIBE
STATE HEALTH BOARDS TO SUBMIT
TO ITS CONTROL.

The Children's Bureau, when opposing congressional proposal to place federal administration of the maternity act under the U. S. Public Health Service, contended "it was not a public health measure" and that it would be a "fatal error" to place the administration of the maternity act under "the sole supervision of physicians" instead of under a bureau in the labor department.

As an illustration showing that the maternity propagandists blow both hot and cold when it is to their advantage to do so, we call attention to the fact that the Children's Bureau and its backers flooded the newspapers and magazines with "sob-sister" propaganda purporting to show that the lives and health of mothers and babies depended upon this act as a *health measure*.

Congress was publicly indicted practically as a body of Herods. Mrs. Florence Kelley, for example (Wischnewetzky), in "Mothers' and Children's Last," *Pictorial Review*, February, 1921, denounced congress for spending "millions for cattle, sheep and swine" and "not a cent" for mothers and babies, etc. When this much accused congress challenged by Mrs. Kelley to explain "Why Does Congress Continue to Wish to Have Mothers and Babies Die?" (Senate hearings, May, 1920, p. 53) sought to save mothers and babies by giving administration of the act to the U. S. Public Health Service, or by establishing maternity hospitals and maternal nursing schools (as Senator Moses proposed), such suggestions were denounced respectively as a "fatal error" by Miss Lathrop and ridiculed as "bricks and mortar" by Mrs. Kelley.

Backers of this act were so much more interested in the capture of power for the Children's Bureau than in the health of mothers and babies, that congressmen were flatly told by these "reformers" that "they preferred no legislation at all on maternity and infancy unless the Children's Bureau administered it."

Representative Dennison of Illinois said:

"This view has been expressed to me in com-

munications received through the mail, that, rather than have the administration of this bill taken from the Children's Bureau, they would rather have no legislation at all on the subject." (House hearing, July, 1921, pp. 261, 262.)

Yet this fundamental contention of the Children's Bureau, made to capture the administration of the act for itself—that it was "not a health measure" and it would be a "fatal error" to place such work under the "sole supervision of physicians"—has been proved false by the maternity act itself.

The real fatal error—of the federal government alone—in placing this health matter under a *radical labor bureau*, has been repudiated and reversed by every one of the states in selecting the state agency.

Of the 43 states accepting the maternity act, 41 placed its administration under State Boards of Health. Only two—Colorado and Iowa—place it under the State Education Department and the State University, respectively. (Children's Bureau of Publication, No. 148, p. 52, list of administrative agencies.)

Not a state in the Union places the administration of this act under a Labor Department Bureau or industrial commission.

Why, then, should the *State Health Boards*, in a matter which the maternity act itself demonstrates a public health function, be offered bribes by the federal government to allow the federal Children's Bureau to control all plans for the health of mothers and babies? Because not a State Health Board would submit willingly to the dictatorship of the lay chief of a federal bureau of social workers, unless bribed to do it.

The United States Public Health Service, which has been cooperating with state authorities for years in a scientific manner, has never begged congress to bribe state health boards to submit to its control. Instead, Dr. L. L. Lumsden of the Public Health Service, testifying against this maternity act, declares:

"What particular branches of health work are indicated in a given locality must be determined by careful local studies. I cannot determine here in an office in Washington how money available for health work can be spent to the best advantage in a given community; that has to be determined by someone on the local job." (House hearings, July, 1921, p. 224.)

There was the voice of the scientist, the

trained public health physician, with over twenty years of experience—showing that under science, health and efficient administration, as well as under the constitution, the expenditure of public money in this public health matter "has to be determined by someone on the local job," yet the maternity act gives a bureau of social workers, at their mahogany desks in Washington, the right and power to control all "plans" and expenditures of State Health Boards in this matter that is *completely reserved for the states* in the constitution.

—Abstracts from *The Woman Patriot*.

CONGRESS FAILED TO RE-ENACT THE SHEPPARD-TOWNER LAW.

Among the bills before Congress that failed to pass was the one to extend for an additional two years the provisions of the Sheppard-Towner Law. The five-year period for which this law was originally passed will expire by limitation, June 30, 1927. The House passed a bill to extend this period for two years expiring June 30, 1929, but the Senate Committee on Education and Labor reported the bill with recommendation that the extension be for one year only. Numerous efforts were made in the closing days of Congress to pass the bill in the Senate; but all efforts failed, and unless the Senate passes the bill in the short session beginning in December and ending March 4, the Sheppard-Towner Law will expire, June 30, 1927. Another measure that failed was the Treasury Department bill "to strengthen the Harrison Narcotic Act." This bill was opposed by the medical profession generally on the ground that it was unreasonable. It was opposed also by druggists because it required druggists to attempt to learn whether or not a prescription signed by a physician "was issued in the course of professional practice only." The bill was permitted to remain in committee as a result of testimony presented by the National Retail Druggists Association, by wholesale drug manufacturers and by the American Medical Association.

STATUS OF NEW MEDICAL AND DENTAL ARTS CLUB OF CHICAGO

Erection of the new medical and dental arts building is progressing rapidly. Early in June the site was turned over to the general contractors, the Thompson-Starrett Company. The

old buildings were wrecked and the ground cleared. Forty-two caissons reaching to bedrock at an average depth of one hundred feet have been sunk and the concrete piers completed without difficulty. This is an unusual piece of good luck, as many large downtown office buildings, especially near the river, have encountered serious trouble in the form of quicksands, subterranean lakes and similar treacherous strata, overcome only by expensive methods. Through good fortune the foundations have been completed at minimum cost, saving much time and money. Derricks are in position to begin placing steel by the middle of September. The steel has all been ordered and made.

As the contractors are under bond to deliver a completed building by May, 1927, the building will be ready for occupancy by that time. The twenty-second and twenty-third floors of the twenty-three-story building will be devoted to club purposes. A two-story auditorium located on the fifth and sixth floors will seat 1,000 persons and will furnish a permanent meeting place for all the larger medical and dental organizations. Smaller meeting halls with seating capacity up to 250, located on those same floors, will house the various special societies. Adjoining will be found office space for those organizations needing business quarters, such as the American Dental Association, the Chicago Medical and the Chicago Dental Societies and numerous others.

The Board of Directors has selected the firm of Clark & Trainer as rental agents and managers for the building. Blue prints for renting have been prepared and an active leasing campaign is under way. The thirteenth to the twenty-first floors, inclusive, will be leased to commercial houses, preferably those handling medical and dental supplies.

Completion of this building will give Chicago an unique professional building. This professional center will be owned by the members of the two professions. There the social, scientific, professional and commercial activities of the professions will be housed permanently. The Board of Directors has instructed attorneys of the club to reorganize the club on a stock basis. As soon as this is legally advisable, membership and joint ownership in a modern office building within one-half block of Marshall Field & Company's retail store will be a profitable investment.

Desirability of a central and permanent loca-

tion for our professional organizations is recognized by everyone. Possibility of putting over successfully such a plan has been discussed for forty years in the Chicago Medical Society. This project has become an absolute certainty. Membership is filling up. Considerably more than half of the life memberships are sold. With the united support of the leaders of the two professions, this project can be triumphantly completed with assurance for our professional organizations of a home of their own for all time to come.

EDUCATING PROSPECTIVE MEMBERS OF THE LEGISLATURE

The legislative committee of the Illinois State Medical Society, under date of May 6, 1926, just after the primaries which nominated candidates for the legislature for the respective political parties, sent to each candidate the following letter:

Springfield, Illinois, May 6, 1926.

Dear Sir:

As a candidate for the Illinois General Assembly you will, no doubt be interviewed by many groups interested in legislation to be opposed or enacted.

You will be solicited by the chiropractors, osteopaths, naprapaths and other drugless healers seeking individual rights by the aid of your vote.

There is at the present time a law on the statutes known as the "Medical Practice Act" which fairly covers ALL who seek to be licensed by the State to treat the sick. Chiropractors ARE admitted to examination and a fair proportion are successful in accordance with their learning.

The largest chiropractic school in the State of Illinois is recognized by the Department of Registration and Education, and its students are being examined at every examination held by the board.

Chiropractors are seeking class legislation and do not wish to come under the law now in force for the protection of public health.

The Supreme Court has upheld the present law on three different occasions. The legislative committee of the Illinois State Medical Society shall attempt to send you complete and impartial information on this interesting subject from time to time before the 1927 session of the legislation.

We would suggest that you get all the facts available before promising your support to medical men, chiropractors or any other group.

If agreeable we would appreciate an expression from you regarding your idea concerning the important matter of adequately protecting the citizens of the State, relative health laws.

Yours very truly,

JOHN R. NEAL,

Chairman Legislative Committee.

THE FIRST VOLUME OF THE MEDICAL HISTORY OF ILLINOIS IN PRESS

Announcement is made that the first volume of the "History of Medical Practice in Illinois" is in press and will be delivered at an early date.

This is the work compiled by a committee as a monument to medical pioneers and as a commemoration of the seventy-fifth anniversary of the Illinois State Medical Society. This volume carries the history from geologic times up until the year 1850. From 1850 to the current date will be cared for in a later volume. Dr. Lucius Zench is the editor of Volume One.

The committee feels that all subscribers will agree that an unusual piece of work, replete with interest and crammed with citations of piquant charm and solid historical value, rests between the covers of this book.

The volume, however, will soon be able to speak for itself.

Every physician, library and county medical society should have a volume of this history. Sold on subscription. Price, \$10.00. Fill in and mail the following order blank.

THE HISTORY OF MEDICAL PRACTICE IN THE STATE OF ILLINOIS SOLD ON SUBSCRIPTION AUTHORIZED BY ILLINOIS STATE MEDICAL SOCIETY

To The Committee on Medical History,
Illinois State Medical Society.
Care Cashier.
The Bowmanville National Bank,
4806 North Western Ave., Chicago, Ill.

Please send.....copies of "THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS" by
Express Parcel Post for which I will pay at the rate of Ten Dollars (\$10.00) per copy to address below. Enclosed and
payable to The Illinois State Medical Society History Committee is {Cheque, Money Order, } for.....
{Draft, Express Order }
.....Dollars (\$.....)

Signed
Street No.City or TownState.....

Progressive physicians, medical schools, hospitals, libraries, reference and statistical bureaus, and institutions of learning generally will want a copy of this volume as a concise dependable authority for daily use. Unique, comprehensive, and a long wanted unit of historical value, this chronicle of Illinois progress is a record of work done for humanity by the profession. These annals are a bequest of value for posterity; an heirloom for the children, relatives and friends of former and present members of the Illinois State Medical Society.

ORDER YOUR COPY TODAY! DON'T LOSE OUT ON THIS!

THE MOLINE MEETING IN 1927

The Rock Island County Medical Society is now working to make the 1927 meeting in Moline one to be long remembered.

The date for the meeting has been set for May 31, June 1 and 2.

Dr. A. T. Leipold, Moline, has been selected as chairman of the Committee on Arrangements. The other members of this committee are:

W. D. Chapman, Silvis.
K. W. Wahlberg, Moline.
J. W. Seids, Moline.
H. A. Beam, Moline.
F. J. Otis, Moline.
Frank Davenport, Moline.
G. D. Hauberg, Moline.
T. L. Thompson, Moline.

D. B. Freeman, Moline.
Hada Carlson, Rock Island.

The membership of other committees are as follows:

Advisory and Publicity Committee—

A. T. Leipold, Moline. General Chairman.
W. D. Chapman, Silvis.
D. R. Nelson, Moline.
Perry Wessel, Moline.
B. J. Lachner, Rock Island.

Finance Committee—

K. W. Wahlberg, Moline, Chairman.
C. C. Ellis, Moline.
J. Henry Fowler, East Moline.
H. J. Friedman, Rock Island.
F. H. First, Rock Island.
Wm. Snively, Rock Island.
W. H. Meyers, Coal Valley.

Reception Committee—

J. W. Seids, Moline, Chairman.
 A. M. Beal, Moline.
 H. E. Beck, Moline.
 T. C. Economus, Moline.
 G. F. Johnson, East Moline.
 A. E. Anderson, Rock Island.
 Jos. DeSilva, Rock Island.
 J. E. Assay, Rock Island.
 J. R. Hollowbush, Rock Island.
 W. F. Myers, Coal Valley.
 O. S. Dailey, Port Byron.
 L. C. Moore, Reynolds.
 B. V. Marquis, Buffalo Prairie
 W. L. Eddy, Milan.

Meeting Place Committee—

H. A. Beam, Moline, Chairman.
 A. D. West, Moline.
 J. D. McKelvey, Moline.
 H. M. Gibson, Moline.
 F. E. Bollaret, East Moline.
 P. H. Miller, Rock Island.
 F. C. Souders, Rock Island.
 Anton Knutson, Reynolds.

Clinical Material Committee—

E. J. Otis, Moline, Chairman.
 L. D. Barding, Moline.
 M. S. Dondanville, Moline.
 George Morrow, Watertown State Hospital.
 A. E. McEvers, Rock Island.
 A. E. Williams, Rock Island.
 F. D. Paul, Rock Island.

Eye, Ear, Nose and Throat Committee—

Frank Davenport, Moline, Chairman.
 F. J. Flatley, Moline.
 Louis Ostrom, Rock Island.
 C. E. Robb, Rock Island.
 C. J. Rochow, Rock Island.

Information and Hotel Committee—

G. D. Hauberg, Moline, Chairman.
 H. A. Arp, Moline.
 E. A. Edlen, Moline.
 J. H. Long, Moline.
 F. O. Ringnell, Moline.
 A. F. Trembley, Moline.
 J. M. Woods, Moline.
 Ralph Dart, Rock Island.
 A. F. Mueller, Rock Island.

Sports, Golf and Aeroplane Committee—

T. L. Thompson, Moline, Chairman.
 C. C. Sloan, Moline.
 H. S. Bennett, Moline.

L. A. Dondanville, Moline.
 R. W. Hardinger, East Moline.
 G. L. Eyester, Rock Island.
 B. J. Lachner, Rock Island.

Entertainment and Transportation Committee.

D. B. Freeman, Moline, Chairman.
 G. L. Carlton, Moline.
 W. T. Hinman, Moline.
 G. A. Wiggans, Milan.

Ladies' Entertainment Committee—

Hada Carlson, Rock Island, Chairman.
 Maude T. Rogers, Moline.

(Rest of Committee to be announced later.)

Hotel facilities in the Tri-Cities are entirely adequate to take care of a large attendance, so that it will not be necessary to use private homes. Meeting places are being arranged so that all Section meetings can be centralized to the best advantage.

The Sports Committee will arrange a golf tournament for Thursday if a sufficient number of physicians are interested. The Committee on Arrangements would appreciate letters from members who would participate in a tournament; address either the general chairman, A. T. Leipold, Moline, or Dr. T. L. Thomson, Moline, Chairman of the Sports Committee. There are five splendid golf courses in the Tri-Cities available for such an event.

Within a short time an announcement will be made in the JOURNAL of the hotels, their capacities, rates, etc., so that arrangements can be made for reservations through the proper committees. Every member of the Rock Island Medical Society has been assigned a definite duty and there is every evidence of a 100% efficiency in their various functions, with the idea in view of making the 1927 Moline meeting of the Society one to be long remembered by all who attend it.

BIOGRAPHY OF DR. JARED CHARLES HEPBURN*

"On a winter evening when you are sitting around the table in your home, with your company and dear ones around you, when the night is dark and dreary, when the rain and snow are raging outside, when your room inside is bright and warm with a blazing fire—sometimes it happens that a sparrow flies into the bright room

* Address by Dr. S. S. Schachet at the St. Bernard's Hospital Staff Meeting, April, 1926.

and then flies out at the other end into the dark night again. We see him for a few moments, but we know not whence he came nor whither he goes into the blackness of the storm outside." So, is the life of man. It appears for a short space in the warmth and brightness of this life—amongst friends and dear ones and it is then blotted out from our vision. Yet, the nobility of that soul, the loftiness of the ideals, the force of that character and the influences of that life can be vividly portrayed no more aptly than through the voice of that soul's contemporaries.

Nearly two months ago, that familiar and honored name—Jared Charles Hepburn—was blotted from our roll, but in our memories it is so deeply graven that the sound of it will always recall to mind one of our most notable figures in our circle in which he moved for so many years.

He filled, perhaps, a larger place in popular and professional esteem than any of his contemporaries, not because of his superior genius, nor because of great acquirements, but rather because of a character that somehow grasped at once the affection of his fellow men and made them trust and honor him.

Some men have achieved distinction as a result of a single stroke of genius, and scaled the heights of fame—others, as the result of discoveries of great significance, but most men are able to place the impress of their personalities as the result of long and tedious years of effort by service. In this last group should be placed the name of Jared Charles Hepburn.

Jared Charles Hepburn was born December 2, 1864, the son of Jared Hepburn and Katharine Hoyt, in St. John's, New Brunswick, Canada.

At the age of eight, his father moved to the States and settled on a farm in St. Claire, Wisconsin. He completed grammar school and later, through his own efforts by selling newspapers, he was able to complete his high school work. He attended the University of Chicago from 1886 to 1888.

In 1888 he entered the Chicago Medical School, now Northwestern University. He was graduated in 1890 and served his assistantship and internship in Mercy Hospital under Dr. Casselberry, Professor of Eye, Ear, Nose & Throat. Shortly after he opened offices at 36th and Halsted Streets, where he practiced medicine

and surgery for thirty years, later opening offices at 63rd and Halsted Streets.

In 1893 he married Miss Martha Kloko. Four children were born.

Dr. Hepburn's standing in the surgical world must be judged by his ability. Prolific contribution to surgical literature is not a characteristic of the class of surgeons of which Dr. Hepburn was a leader—the essentially practical man.

He was a broad man with an unbounded faith in the possibilities of the science of healing and an enthusiasm that disappointment never abated and failure could not quench. He could not be called a learned man of letters, but he was what some learned men never become—a wise man.

He acquired his art mainly at the bedside, and it was there that he displayed most conspicuously the qualities which gave him his high claim to distinction as a physician and surgeon. He was always self-possessed, no emergency disconcerted him, no difficulties appalled him. He was uniformly calm and master of the situation. He was a keen and comprehensive observer.

As a patient of mine for the past year and a half, I was able to observe those sterling qualities of sincerity and industry of a self-made man.

He was singularly free from all prejudices and ever ready to acknowledge that new ideas and new methods might be better than the old. He was always generous, but realized the many shortcomings of man and his appreciation for services rendered, yet he never lost faith in men. He was conspicuously the friend of young men.

He was always aspiring to a clearer vision; he was free from the fetter of jealousy and conceit. He served his fellow men.

Dr. Hepburn died March 17, 1926.

This record of accomplishment and influence exerted by Dr. Jared Charles Hepburn furnishes a striking example of the capacity of a single individual to do good by a well spent life. Lives like this one—so rich in kindness and love, coupled with force of character directed for good, can well be kept before the public mind as an inspiration to all in every walk of life of a self-made man.

Truly, to have lived such a life and to have wrought as he did, though the span of his years was less than 63, should be sufficient and equal to all requirements of God and man, and should satisfy the aspirations of the noblest soul.

NARCOTIC LAW SUPERVISED BY POLITICIANS—MORE LAY SUPERVISION OF MEDICAL PRACTICE

Another cart is about to be hitched before the horse in the latest endeavor of the laity to dictate the practice of medicine. Aroused to hysteria by agitators shrieking against unfortunate narcotic addicts, the so-called public conscience is proposing to load the statute books with even more maudlin and vicious legislation. If the flamboyant Kindred bill goes through, the public welfare and the medical profession will find itself involved in another maze of political barbed wire fences, that will do nobody any good and everybody much harm.

That addicts of narcotics should receive all possible help to free them from their frightful slavery, no one denies. That such relief should come and can come, efficaciously, only from scientific sources, everyone should know.

To place restrictions about the dispensing of any of the elemental drugs needed in the preservation of life, and to have the levers controlling these restrictions in the hands of lay people or political appointees is one of the direst crimes committed in the name of civilization. Enforcement of the Volstead law falling in ruins in every community of the United States and enriching lawbreakers to the tune of millions at the expense of honest taxpayers, appears to lack the effect of a salutary example upon the proponents and crusaders for the Kindred bill (H. R. 9962).

Among other iniquitous items this bill provides that "the Government may take over any and all plants in the country for the manufacture of opium, coca leaves, cocaine, or any compound, manufacture, salt, derivative or preparation thereof"; and also "any synthetic substitute for them." Further, this taking over may be by condemnation or private sale, and the price "may be fixed by the Federal Narcotic Board."

This board, it is interesting to learn, will be composed of directors, to the number of five. That there may be no doubt whatsoever of their usefulness as a political asset to any ward boss or politician born with the palm open, these five directors will be "appointed by the president with the advice and consent of the Senate." To further enhance their political value, these jobs will be for life and the salaries \$12,000 per an-

num. Now, of course, there is included the amending clause that the job can be retained for life "during good behavior," but no standard is set for what might constitute "good behavior," and the board and the new portfolio of administration, springing fullborn from the brain of the reformers, will come forth full panoplied with all sorts of experts, officials and managers who will conduct investigations and see to law enforcements. The healthy democratic stomachs of the citizenry of the United States are good and strong, but for any group of political fixers to attempt to jam a dose like this down the throats of the taxpayers in the face of the present expense, inefficiency and graft of the prohibition enforcement, would insult the digestive apparatus of both a hog and an ostrich. Truly the ways of the glutton are beyond the pale of common sense!

Placing the entire control of various powerful and vital drugs in the hands of this board and giving to this body the right to act as sole arbiter of the amounts of these necessary drugs to be used by the dental and medical professions means turning into the hands of the political bosses of the United States the vital statistics of this country.

General provisions as to registration, special taxes and licenses are similar to the Harrison law, but more drastic.

The profession is about to be handed, in the vernacular, more of the same of which already the profession has had more than enough.

Increased taxes levied to give political henchmen soft jobs with hard dollars a-plenty as the remuneration, therefore, are thumbscrews enough to place upon honest folk. But when, in addition to a fat slice of the public income, politics and those who serve them best by playing the courtesan with democratic rights and ideals, are afforded opportunity to traffic with physical well-being of those who pay the taxes, it is time indeed that the worm turned.

If the Government would establish sanitariums for the cure of drug addicts and if it would turn these and the entire dispensing of narcotic drugs over to the medical profession, then the Government would be about its right and just business. "Render unto Caesar the things that are Caesar's." Surely the dispensing and distribution of any medicament belongs to those who have the background of scientific

knowledge and the skill of the medical profession. When the Government begins to practice medicine, when the Government begins to take the distribution of drugs and the diagnosis of conditions calling for medical skill, into the hands of lay people, even when backed up by the best bound statute books, then the Government is well on the way to make a monkey of itself and a corpse out of the nation.

What the Government needs is a good purge of those laws that pretend to do a lot of good where it isn't needed and which really work incalculable harm in a place where public outrage masquerades as public welfare. If this Kindred bill goes through, a place on that directorate will not only be far above rubies, but in actual power over the health, wealth and welfare of this nation it will surpass the influence for destruction wielded by Rasputin, the black monk of Russia.

Federal procedure has made for itself a name for red-tape and quibbling. That bureaucracy at Washington keeps growing, both in size, extent and influence, until it is an octopus strangling progress. "Give a calf rope enough and he will hang himself" is the old saw. Well, perhaps. Encouraged by the money for political favorites that has been made out of the Volstead law, and the promise for even more fat political cream suggested by the Harrison law, behold foisted upon the people this insufferable Kindred bill.

Any physician who sits idle and watches this nefarious piece of legislation saddled upon the profession and the public is no better than a murderer or a member of the Spanish inquisition. Do not err by thinking that the bill lacks its sea legs. It has found them and is going strong. Now is the hour for every doctor worthy of his oath to get out and fight the bill.

Take the cart away from before the horse and put it where it belongs. If it is necessary for the doctors and dentists of this country to show the lawmakers how to practice medicine and dentistry, let this be done. But remember, the only way in which to disseminate this education, needed immeasurably, is by virtue of the ballot-box. Get the senators and representatives in the only place where they can be hurt—the votes of your community as shown in the election returns.

Find out today what these representatives of

your immediate neighborhood think about the Kindred bill and let them know what you are going to do if it is necessary to resort to the "big stick" to make them "listen to reason."

DRUGGISTS PROTEST AGAINST BEING HARASSED BY NARCOTIC DIVISION.

PROSECUTION OF PHARMACISTS BY THE NARCOTIC DIVISION

The Chicago Branch of the American Pharmaceutical Association adopted the following resolution at its April meeting after careful consideration of a paper presented by Pharmacist Peter J. Kolb, this year's president of the branch and an honored member of the C. R. D. A., at the meeting, March 5, entitled "The Problem of the Narcotic Addict."

RESOLUTION

Whereas, pharmacists have been harassed and placed in jeopardy by prosecution and persecution from officials enforcing the Harrison Anti-narcotic law in connection with the dispensing of narcotics to incurables upon registered physician's prescriptions; and

Whereas, individuals with incurable diseases requiring narcotics and aged and incurable addicts under the advice of physicians need remedial and humanitarian treatment, therefore be it

Resolved: That the pharmacists of this country unite in a demand that provision be made for registering each such sufferer from addiction or other incurable disease and that a method be devised whereby pharmacists may supply the legitimate requirements of such sufferers upon receipt of proper order forms from the physician in attendance without interference from uniformed narcotic inspectors.

THE FATHER OF THE MENDALIAN LAW

Gregor Mendel was a monk, lived in a cloister, taught school and had a hobby—garden peas. He died in 1884 at the age of sixty-two, and was promptly forgotten. What he found out about peas and buried in a little article in 1866 was not discovered until 1900. This is Mendel's law, according to Walter: "When parents who are unlike with respect to any character are crossed, the progeny of the first generation will be like the dominant parent with respect to the character in question. When the hybrid offspring of

the first generation are crossed with each other, they will produce a mixed progeny: 25 per cent. will be like the dominant grandparent; 25 per cent. like the other grandparent; 50 per cent. like the parents resembling the dominant grandparent."

WHY HAVE PHYSICIANS GIVEN FREELY TO THE WORLD THEIR VALUABLE DISCOVERIES?

Why is it that Dr. Banting, when he finally succeeded in isolating the active principle of the internal secretion of the pancreas, did not erect a laboratory in a great city and demand \$5,000 for individual treatments of cases of diabetes?

By the most conservative estimate at least one hundred thousand diabetics to whom life would be cheap at \$5,000 would have raked and scraped together the needful and swarmed to him for succor. A five hundred million dollar fortune permitted to trickle purposely through his fingers—a Ford fortune given freely to the suffering world!

Why?

Galvan, who gave to the steel industry the first practical method of coating iron to make it rust-proof, called his discovery "galvanizing" and made a fortune. And Lee de Forest, inventor of the radio tube that made home reception possible, is rich—no tubes are offered at free clinics to those suffering from the itch to hear XYZ jazz!

But the man who finally isolates the cancer germ, if it is a germ, will gleefully and proudly broadcast his discovery to an anxious, waiting world, free, gratis and for nothing; because he will be, undoubtedly, a medical practitioner.

Why?

Why did Dr. Everett, a physician in a western village of eight thousand, publish at his own expense in his local newspaper, a full-page warning that hundreds of his townsmen were in danger of poison-ivy poisoning—that already he had served seven cases, and by investigation had found that the woods where violet pickers spent their Sunday afternoons were overgrown with this noxious weed?

Why have physicians, from time immemorial, given freely to the world their valuable discoveries, while others, greedy for the dollars, made it pay through the nose?

Why do medical men favor prevention when they realize that every ounce of prevention they

sponsor means a dollar's worth of "cure" out of their pockets?

In no other business or profession can one be found to match the physician whose sole aim is to do his work so well that soon he will have no job; aye, even further, to prevent so well that there will be no jobs for him.

—*Medical Packet Quarterly.*

WE DO NOT NEED MORE LAW, WE NEED MORE RELIGION

We do not need more national development, we need more spiritual development. We do not need more intellectual power, we need more spiritual power. We do not need more knowledge, we need more character. We do not need more law, we need more religion. We do not need more of the things that are seen, we need more of the things that are unseen.—*Calvin Coolidge.*

IT IS GETTING TOUGHER EVERY DAY TO MAKE A LIVING.

A SELF-ELIMINATING PROFESSION

The medical profession is the only one where good and efficient work tends to reduce the prosperity of those in it. The plumber does a good job, but corrosion is his ally and soon he must come back to repair the pipe he installed last year. The lawyer wins the case, gets paid for writing up the agreement, and makes more work for himself by writing it in such a way that, in case of dispute, he alone can interpret what he has done.

But the good and worthy doctor cheats himself every time he does a good job. He improves the sanitary system of a town—and loses a few hundred potential typhoid cases. He discovers, as Pasteur did, the germ theory, and immediately reduces his number of future cases.

All of which is good, right and proper; and in perfect accord with the noble and high aims of the profession. But it is getting tougher and tougher every day to make a living, to say nothing of a competence in a field where good work cuts down the chances for future livelihood.—*Med. Pocket Quarterly.*

LAYMEN TO ASSIST THE DOCTORS.

A recent issue of the *Saturday Evening Post* in an editorial under the caption, "Help for the Doctor," says:

The Medical Society of the County of Kings, Brooklyn, one of the oldest in the country, has

just established the interesting precedent of admitting laymen to associate membership. The avowed reasons for this novel departure are that the inclusion of influential citizens would create friends of medical progress and enable the public to assist the profession in its efforts to restrain unqualified practitioners and prevent the employment of harmful methods. Whether or not this plan will work out as effectually as its sponsors hope still remains to be seen. In the meantime it can scarcely be regarded as anything but a step in the right direction.

There are other fields than that of popular medical education in which laymen can do much to further the efforts of physicians. Thousands of lives and vast sums of money are annually exacted as tribute to unscrupulous nostrum venders. There are dozens of so-called consumption cures and cancer cures which do a tremendous amount of harm, owing to the fact that faith in them keeps persons away from competent practitioners until it is too late to save their lives. There are means of coping with this growing evil, but they are in the hands of legislators and business men and not in those of the doctors.

There is another matter in which physicians stand in grave need of the cooperation of the lay public. Compulsory vaccination laws are under fire. Bills have been introduced in state legislatures which, if they became laws, would prevent the manufacture of smallpox vaccine, diphtheria antitoxin and most other biological products which play so large a part in modern medicine.

If the comparative inactivity of physicians and men of science is a trustworthy index of their reaction to these attacks, even they do not perceive the reality of the menace which threatens their calling and all the millions whose lives depend upon its free and proper exercise. Unless the situation is promptly and vigorously taken in hand it will inevitably become worse before it can become better.

NOTHING TO LIVE FOR

"Do you think I shall live until I'm ninety, doctor?"

"How old are you now?"

"Forty."

"Do you drink, gamble, smoke, or have you any vices of any kind?"

"No. I don't drink, I never gamble, I loathe smoking; in fact, I haven't any vices."

"Well, good heavens, why do you want to live another fifty years?"—*Selected.*

PROGRAM

INTER-STATE POST GRADUATE ASSEMBLY OF NORTH AMERICA

Cleveland, Ohio, October 18-22, 1926

PROGRAM

General Headquarters for all Scientific Sessions and Exhibits, Municipal Auditorium

Hotel Headquarters: Hotel Cleveland

On October 14th, 15th and 16th there will be pre-assembly clinics in the hospitals of Cleveland

First Day, Monday, October 18, 7 A. M.

1. Diagnostic Clinic (Medical). Dr. Campbell P. Howard, Prof. of Medicine, McGill University Faculty of Medicine, Montreal, Canada.

2. Diagnostic Clinic (Surgical). Dr. Clarence L. Starr, Prof. of Surgery, University of Toronto Faculty of Medicine, Toronto, Canada.

3. Diagnostic Clinic (Medical). Dr. Friedrich Mueller, Prof. of Medicine, University of Munich, Munich, Germany.

GYNECOLOGICAL SYMPOSIUM

4. Diagnostic clinic and address. Cases of Uterine Fibroids. "The Rational Treatment of Tubal Disease." Dr. C. Jeff Miller, Prof. of Obstetrics and Clinical Gynecology, Tulane University, New Orleans, Louisiana.

5. Diagnostic clinic and address. Pelvic cases. "Pelvic Infections." Dr. F. W. Marlow, Associate Prof. of Gynecology, University of Toronto Faculty of Medicine, Toronto, Canada.

Intermission

Review Exhibits

6. Diagnostic clinic and address. Pelvic cases. "Displacement of Uterus and Vaginal Walls." Dr. Howard C. Taylor, Prof. of Clinical Gynecology, Columbia University School of Medicine, New York, N. Y.

7. "The Contrasting Indications for Surgery and Radiation in the Treatment of Tumors of the Uterus." Dr. John O. Polak, Prof. of Obstetrics and Gynecology, Long Island College of Medicine, Brooklyn, New York.

8. "New Researches Concerning Cyclic Processes in the Female Genital Organs." Dr. A. H. M. J. Van Rooy, Prof. of Obstetrics and Gynecology, University of Amsterdam, Amsterdam, Holland.

9. Address in Gynecology. Dr. Albert Doderlein, Prof. of Obstetrics and Gynecology, University of Munich, Munich, Germany.

Afternoon Session, 1 P. M.

PROBLEMS OF CHILD-BEARING—SYMPOSIUM

10. "The Birth Control Movement." Dr. Robert L. Dickinson, New York, N. Y.

11. "Sterility, Abortion and Miscarriage." Dr. Barton Cooke Hirst, Prof. of Obstetrics, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

12. "Certain Important Medical Complications of Pregnancy." Dr. William W. Herrick, Associate Prof. of Clinical Medicine, Columbia University School of Medicine, New York, N. Y.

13. "Indications for Cesarean Section." Dr. Arthur

H. Bill, Prof. of Obstetrics, Western Reserve University School of Medicine, Cleveland, Ohio.

Intermission

Review Exhibits

14. "Surgical Complications of Pregnancy, Appendicitis, Tumors of the Uterus, Tumors of the Breast, Hyperthyroidism, Acute Ileus." Speaker to be announced later.

15. "Pyloric Stenosis in Infants." Dr. Richard W. Bolling, New York, N. Y.

16. "Problems in Infant Feeding." Dr. H. J. Gerstenberger, Prof. of Pediatrics, Western Reserve University School of Medicine, Cleveland, Ohio.

17. "Nephritis." Dr. Friedrich Mueller, Prof. of Medicine, University of Munich, Munich, Germany.

18. Address in Pediatrics. Dr. N. Gurgel, Prof. of Medical Pediatrics and Child Hygiene, Faculty of Medicine, University of Rio De Janeiro, Rio De Janeiro, Brazil.

Evening Session, 7 P. M.

CANCER—SYMPOSIUM

19. "Carcinomata of the Buccal Cavity." Dr. Joseph Bloodgood, Associate Prof. of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

20. "Is Cancer the Result of an Infectious Process?" Dr. Francis C. Wood, New York, N. Y.

21. Demonstration of the Growth of Tissue by means of moving pictures. Dr. Alexis Carrel, Rockefeller Institute, New York, N. Y.

22. "End Results of the Treatment of Cancer and the Factors Determining Them." Dr. Robert Greenough, Assistant Prof. of Surgery, Harvard Medical School, Boston, Mass.

Second Day, Tuesday, October 19, 7 A. M.

1. Diagnostic Clinic (Surgical). Dr. David P. D. Wilkie, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

2. Diagnostic Clinic (Medical). Dr. A. Simonena, Prof. of Medicine, University of Madrid, Madrid, Spain.

3. Diagnostic Clinic (Surgical). Dr. Dean D. Lewis, Prof. of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

4. Diagnostic Clinic (Medical). Dr. Henry A. Christian, Prof. of Medicine, Harvard Medical School, Boston, Massachusetts.

GASTRO-INTESTINAL TRACT—SYMPOSIUM

5. Diagnostic clinic and address. Abdominal cases. "Acute Abdominal Lesions." Dr. John F. Erdman, Prof. of Surgery, New York Post Graduate School of Medicine, New York, New York.

Intermission

Review Exhibits

6. Diagnostic clinic and address. Rectal and colon cases. "Carcinoma of the Rectum and Colon." Dr. Daniel F. Jones, Boston, Massachusetts.

7. "Chronic Duodenal Ileus." Mr. David P. D. Wilkie, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland.

8. "Surgical Indications and End Results of Operations for Ulcer of the Stomach." Speaker to be announced later.

9. "Surgical Indications and End Results of Operations for Cancer of the Stomach," Dr. Donald C. Balfour, Prof. of Surgery, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota.

10. "Intestinal Toxemia." Dr. Mariano R. Castex, Prof. of Clinical Medicine, National University of Buenos Aires, Buenos Aires, Argentina.

Afternoon Session, 1 P. M.

GASTRO-INTESTINAL TRACT—SYMPOSIUM (CONTINUED)

11. "Medical Treatment of Ulcer of the Stomach." Dr. Franklin W. White, Boston, Massachusetts.

12. "The Indications and Contra-Indications for Surgical Interference in Cases of Duodenal Ulcer." Dr. Campbell P. Howard, Prof. of Medicine, McGill University Faculty of Medicine, Montreal, Canada.

13. "The Achlorhydria Group of Disturbances." Diagnostic clinic and address. Dr. Henry A. Christian, Prof. of Medicine, Harvard Medical School, Boston, Massachusetts.

14. "The Autopsy." Dr. Howard T. Karsner, Prof. of Pathology, Western Reserve University School of Medicine, Cleveland, Ohio.

Intermission

Review Exhibits

15. Address in Surgery. Dr. Ferdinand Sauerbruch, Prof. of Surgery, University of Munich, Munich, Germany.

OTO-LARYNGOLOGY—SYMPOSIUM

16. "Inflammations of the Middle Ear Tract." Dr. Perry G. Goldsmith, Prof. of Oto-Laryngology, University of Toronto Faculty of Medicine, Toronto, Canada.

17. "The Relation of the Tonsils to Systemic Infections." Dr. Samuel Crowe, Prof. of Oto-Laryngology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

18. Address in medicine. Prof. Doleris, President, Academy of Medicine, Paris, France.

Evening Session, 7 P. M.

STUDIES IN APPLIED ANATOMY

19. "Treatment of Hernia." Dr. Carl A. Hamann, Dean and Prof. of Clinical Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.

20. "The Alimentary Canal as Studied by the Medical Student, Radiographic Studies." Dr. T. Wingate Todd, Prof. of Anatomy, Western Reserve University School of Medicine, Cleveland, Ohio.

PHYSIOLOGICAL STUDIES

21. "The Newer Physiology of the Gastro-Intestinal Tract." Dr. Andrew C. Ivy, Department of Physiology, University of Chicago, School of Medicine (Rush), Chicago, Illinois.

22. "Present Knowledge of the Function of the Liver." Dr. Francis Peyton Rous, Pathologist, Rockefeller Institute of Research, New York, N. Y.

Third Day, Wednesday, October 20, 7 A. M.

1. Diagnostic Clinic (Surgical). Dr. William Darrach, Dean of Associate Professor of Surgery, Columbia University School of Medicine, New York, N. Y.

2. Diagnostic Clinic (Medical). Dr. Hans C. Jacobaeus, Professor of Internal Medicine, University of Stockholm, Stockholm, Sweden.

3. Diagnostic Clinic (Surgical). Dr. William D. Haggard, Professor of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

4. Diagnostic Clinic and Address. "Heart Cases." Dr. James B. Herrick, Professor of Medicine, University of Chicago, School of Medicine (Rush), Chicago, Illinois.

5. Diagnostic Clinic (Surgical). Dr. John B. Deaver, Professor of Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pennsylvania.

Intermission

Review Exhibits

RESPIRATORY AND CIRCULATORY DISEASES—SYMPOSIUM

6. "Methods and Results in the Treatment of Emphysema." Col. William L. Keller, Medical Department, United States Army; Surgeon-in-Chief, Walter Reed General Hospital, Washington, D. C.

7. "Lung Abscess—Roentgenographic Aspects." Dr. Walter C. Hill, Cleveland, Ohio.

8. "Lung Abscess—Surgical Aspects." Dr. Evarts A. Graham, Professor of Surgery, Washington University School of Medicine, St. Louis, Missouri.

9. "Practical Use of Thoracoscopy." Dr. Hans C. Jacobaeus, Professor of Internal Medicine, University of Stockholm, Stockholm, Sweden.

Afternoon Session—1 P. M.

10. "The Immediate and Ultimate Prognosis in Cardiac Disease." Dr. R. D. Rudolf, Professor of Therapeutics, University of Toronto Faculty of Medicine, Toronto, Canada.

11. "Summary of Experineces Up-to-Date in the Surgical Treatment of Angina Pectoris." Dr. Elliott C. Cutler, Cleveland, Ohio.

12. "Aortitis and Heart Failure." Dr. Roy W. Scott, Cleveland, Ohio.

13. "Effects of Diseases of the Thyroid, on the Heart and Their Treatment." Dr. Cyrus C. Sturges, Peter Bent Brigham Hospital, Boston, Massachusetts.

BRAIN AND CENTRAL NERVOUS SYSTEM—SYMPOSIUM

14. "Ventriculography." Diagnostic Clinic and Address. Dr. Walter E. Dandy, Associate Professor of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

15. "The Present Status of Our Knowledge of the Pituitary Body." Speaker to be announced later.

16. "Meningeal Adhesions and Their Clinical Significance." Dr. Samuel Clark Harvey, Associate Professor of Surgery, Yale University School of Medicine, New Haven, Connecticut.

17. "Teachings of Epidemic Encephalitis in Regard to the General Physiology and Pathology of the Nervous System." Dr. August Wimmer, Professor of Psy-

chiatry, University of Copenhagen, Copenhagen, Denmark.

18. "The Prevention of Nervous Breakdown." Speaker to be announced later.

19. "Results of Peripheral Nerve Lesions in Civil Life." Dr. Dean D. Lewis, Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Evening Session—7 P. M.

ORTHOPEDICS AND RECONSTRUCTION SURGERY, SYMPOSIUM

20. "Fractures of the Long Bones." Dr. William Darrach, Dean and Associate Professor of Surgery, Columbia University School of Medicine, New York, N. Y.

21. "Fractures of Metacarpal Bones Due to Torsion, or Schlatter's Disease." Dr. Karl Schlatter, Professor of Surgery, University of Zurich, Zurich, Switzerland.

22. "Position of Orthopedics in Medical Instruction." Speaker to be announced later.

23. "Attitudinal Strains." Diagnostic Clinic. Dr. Robert B. Osgood, Professor of Orthopedic Surgery, Harvard Medical School, Boston, Mass.

24. "Orthopedic Management of Visceroptosis." Diagnostic Clinic. Dr. Joel E. Goldthwait, Boston, Massachusetts.

25. "End Results of Arthroplasties of the Hip." Dr. William S. Baer, Associate Professor of Orthopedic Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

26. "Reconstruction Surgery in Civilian Practice." Dr. Clarence L. Starr, Professor of Surgery, University of Toronto Faculty of Medicine, Toronto, Canada.

27. "Transplantation of Foreign Bodies in Orthopedic Practice." Dr. Fritz Lange, Professor of Orthopedic Surgery, University of Munich, Munich, Germany.

Fourth Day, Thursday, October 21, 7 A. M.

1. Diagnostic Clinic (Medical). Dr. Mariano R. Castex, Professor of Clinical Medicine, National University of Buenos Aires, Buenos Aires, Argentina.

2. Diagnostic Clinic (Surgical). Dr. Charles H. Mayo, Professor of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota.

3. Diagnostic Clinic (Medical). Dr. Charles F. Hoover, Professor of Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.

4. Diagnostic Clinic (Surgical). Chest cases. Dr. Ferdinand Sauerbruch, Professor of Surgery, University of Munich, Munich, Germany.

Intermission

Review Exhibits

GOITER—SYMPOSIUM

5. "Differential Diagnosis Between Gastric and Duodenal Ulcer and Gall Stones." Dr. William D. Haggard, Professor of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee.

6. "Re-Study of the Bile Tracts." Diagnostic Clinic and address. Dr. Arthur Dean Bevan, Prof. of Sur-

gery, University of Chicago School of Medicine (Rush), Chicago, Illinois.

7. "The Hepatic Cirrhosis of Surgical Delay." Dr. John B. Deaver, Prof. of Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pennsylvania. Dr. Stanley P. Reimann, Prof. of Experimental Pathology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

Afternoon Session, 1 P. M.

GALL-BLADDER AND LIVER—SYMPOSIUM

8. Diagnostic clinic and address. Goiter cases. "Intrathoracic Goiter." Dr. Francis H. Lahey, Boston, Massachusetts.

9. Diagnostic clinic and address. Thyroid cases. "Cancer of Thyroid." Dr. Eugene H. Pool, Clinical Prof. of Surgery, Columbia University School of Medicine, New York, N. Y.

10. "The Clinical Use of Iodin." Dr. Henry S. Plummer, Prof. of Medicine, University of Minnesota Graduate School of Medicine (Mayo Clinic), Rochester, Minnesota.

INFECTION—SYMPOSIUM

11. "Present Status of Serum Therapy in the Treatment of the Exanthemata." Dr. J. G. Fitzgerald, Prof. of Hygiene and Preventive Medicine, University of Toronto Faculty of Medicine, Toronto, Canada.

12. "Recent Advances in Our Knowledge of Pneumonia." Dr. Russell L. Cecil, Bellevue Hospital, New York, N. Y.

13. "Syphilis of the Heart and Blood Vessels." Dr. Charles F. Hoover, Prof. of Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.

14. "Infectious Endocarditis." Sir Thomas J. Horder, Bt., Prof. of Medicine, St. Bartholomew's Hospital and College, London, England.

Intermission

Review Exhibits

DIABETES—SYMPOSIUM

15. "The Present Status of the Diabetic Problem." Diagnostic clinic and discussion. Dr. Rollin T. Woodyatt, Clinical Prof. of Medicine, University of Chicago School of Medicine (Rush), Chicago, Illinois.

16. "End Results in the Treatment of Diabetes in Children." Dr. Elliott P. Joslin, Clinical Prof. of Medicine, Harvard Medical School, Boston, Mass.

Evening Session, 7 P. M.

DIABETES—SYMPOSIUM (CONTINUED)

17. "Physiological Basis for the Action of Insulin." Dr. J. J. R. MacLeod, Prof. of Physiology, University of Toronto Faculty of Medicine, Toronto, Canada.

18. "The Eye-Grounds in General Diagnosis." Dr. George E. DeSchweinitz, Prof. of Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

PROBLEMS OF POPULATION AND OF HEREDITY

19. "Anomalies of Development." Dr. Charles H. Mayo, Prof. of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota.

20. "Mechanism of Heredity." Edwin G. Conklin, Ph. D., Princeton University, Princeton, New Jersey.

21. "Heredity in the Clinic." Dr. Lewellys F. Barker, Prof. Emeritus of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

22. "Heredity and Cancer." Mr. William Sampson Handley, F. R. C. S., Surgeon, Richard Hollin's Cancer Research School; Middlesex Hospital; Women and Children's Hospital and Guy's Hospital, London, England.

Fifth Day, Friday, October 22, 7 A. M.

1. Diagnostic Clinic (Surgical). Mr. Archibald Young, F. R. C. S., Prof. of Surgery, University of Glasgow, Glasgow, Scotland.

2. Diagnostic Clinic (Medical). Dr. Lewellys F. Barker, Prof. Emeritus of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

3. Diagnostic Clinic (Surgical). Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minnesota.

4. Diagnostic Clinic (Medical). Sir Thomas J. Horder, Bt., Prof. of Medicine, St. Bartholomew's Hospital and College, London, England.

5. Diagnostic Clinic (Surgical). Mr. John M. C. Fraser, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland

Intermission

Review Exhibits

GENITO-URINARY TRACT—SYMPOSIUM

6. Diagnostic clinic and address. "Kidney Lesions, Exclusive of Stones." Dr. Hugh Hampton Young, Clinical Prof. of Urology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

7. Diagnostic clinic and address. Bladder and Prostate cases. "Bladder and Prostate." Dr. Hugh Cabot, Dean and Prof. of Surgery, University of Michigan School of Medicine, Ann Arbor, Michigan.

8. Diagnostic clinic and address. "Stones in the Upper Urinary Tract." Dr. William F. Braasch, Prof. of Urology, University of Minnesota Graduate School of Medicine, (Mayo Clinic), Rochester, Minnesota.

9. "Classification of the Diseases of the Kidney from the Point of View of Progressive Treatment." Dr. Alexander von Koranyi, Prof. of Internal Medicine, University of Budapest, Budapest, Hungary.

Afternoon Session, 1 P. M.

DISEASES OF THE BREAST—SYMPOSIUM

10. Diagnostic clinic and address. "Tumors of the Breast." Dr. John M. T. Finney, Prof. of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

11. "The Conservative Surgical Treatment of the Breast." Dr. L. L. McArthur, Chicago, Illinois.

* * *

12. Address in surgery. Mr. John M. C. Fraser, F. R. C. S., Prof. of Surgery, University of Edinburgh, Edinburgh, Scotland

13. "Summary of Personal Experience in the Field of Abdominal Surgery." Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minnesota.

Intermission

Review Exhibits

14. Address in Medicine. Dr. A. Simonena, Prof. of Medicine, University of Madrid, Madrid, Spain.

15. "The Little Things in Diagnosis, Prognosis and Treatment." Mr. Archibald Young, F. R. C. S., Prof. of Surgery, University of Glasgow, Glasgow, Scotland.

METHODS OF PROTECTION AND RESTORATION—SYMPOSIUM

16. "General Therapeutic Methods for the Protection of Patients in the Extremes of Life." Dr. C. G. Jennings, Detroit, Michigan.

17. "Blood Transfusion; Precise Indications, Blood Grouping, Choice of Methods." Dr. John L. Yates, Milwaukee, Wisconsin.

18. "Protective Role of Certain Drugs with Special Reference to Digitalis and Morphine." Speaker to be announced later.

19. "Anesthesia from the Standpoint of the Surgeon." Dr. George P. Muller, Prof. of Clinical Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

NOTE: The following is an additional list of distinguished teachers and clinicians from foreign countries who have accepted tentatively to take part on the program but have not, as yet, sent in their subjects:

Dr. M. P. Bull, Prof. of Surgery, King Frederick's University, Oslo, Norway.

Dr. Leon Cardenal, Prof. of Clinical Surgery, Universidad Central De Espana, Madrid, Spain.

Dr. J. Alves de Lima, Prof. of Surgery, University of Escola Polytechnics, Sao Paulo, Brazil.

Dr. Pedro S. de Magalhaes, Prof. of Surgery, University of Rio De Janeiro, Rio De Janeiro, Brazil.

Dr. Geza Illyes, Prof. of Urology, Faculty of Medicine, University of Budapest, Budapest, Hungary.

Dr. Milivoie Kostitch, Prof. of Surgery, Faculty of Medicine, University of Belgrad, Belgrad, Jugo-Slavia.

Dr. Manuel Marquez, Prof. of Ophthalmology, Universidad Central De Espana, Madrid, Spain.

Dr. Luis Tamini, Prof. of Orthopedic Surgery, National University of Buenos Aires, Buenos Aires, Argentina.

Dr. Tibor de Verebely, Prof. of Surgery, Faculty of Medicine, Royal University of Budapest, Budapest, Hungary.

* * *

Evening Banquet

Addresses by Distinguished Citizens of the World.

Managing-Director, Dr. William B. Peck, Freeport, Illinois.

STOP PUTTING FALSE TEETH IN OUR NARCOTIC LAWS!

BY A BUSINESS MAN

A movement is on foot to strengthen the Harrison Narcotic Law—by injecting therein a number of new and exceedingly sharp teeth; teeth which are not only dangerous to every physician's prestige and to the welfare of many of his patients, but which also are based on the premises obviously false.

The movement takes the form of a bill, which, says Assistant Secretary of the Treasury Andrews, is "to clear up certain points which have been raised in cer-

tain courts to the disadvantage of the government." The bill was introduced in Congress on April 24th.

Because it pries to a threatening extent into both the unwritten and the constitutional rights of the medical profession, and because it was quite evidently drafted with a serious lack of understanding of the whole narcotic problem, this bill has awakened a tremendous amount of noise.

Indeed it should. Doctors and business men who have never been satisfied that our present narcotic laws are altogether fair, have taken up arms anew. Many who have accepted things as they are, have become convinced that something is wrong which will not be corrected by this new bill.

TRESPASSING ON HONEST PRACTICE

Clearly the bill is a step in the wrong direction. Every doctor should know it. Every doctor should act, must act if he would prevent an unfair deal to himself and his patients.

But before looking at the proposed set of new teeth for the Harrison Narcotic Act, glance over the following brief resume of the narcotic situation.

The facts in this resume are quite sufficient for not making the present laws on the subject one whit stronger, at least the laws that concern the physician. The further fact that the pending bill trespasses directly upon the conduct of an honest practice, upon the personal, confidential relation of doctor to patient, and upon a dozen other inherent rights of the medical profession, makes the falseness of the proposed denture immediately and painfully clear.

Consider the attitude of the world toward the addict. He has been regarded as one who willingly sacrificed his reputation, family, friends, business, and other valued possessions for the enjoyment of "hitting the pipe" or taking a so-called "shot."

He was despised, treated as a leper, though quite naturally. When his funds grew low, he was supposed to turn to stealing, and often did, his self-respect by that time having reached very near the vanishing point. Then his collective self became branded as a criminal.

Yet a recent governmental report says that less than six per cent of addicts are of the criminal class. The other ninety-four per cent are distributed among nearly all the other occupations, from housewife to mechanic.

Presumably, therefore, ninety-four per cent need some cure other than arrest and jail.

But who is better qualified to do the curing than the physician? In spite of that perfectly obvious fact, the government made it a penitentiary offense for a physician to prescribe narcotics for addiction. The government condemned ambulatory treatment.

\$420,000,000 IN BOOTLEG DRUGS

A few physicians were arrested and prosecuted. The news became broadcast. This publicity promptly caused most of the profession to stop prescribing for addiction; they feared that to do so might bring arrest and ruin down upon their heads. It is perhaps a similar fear of publicity that has restrained the same profes-

sion from concerted action to correct a serious and ignorant miscarriage of justice.

For it is plainly understood that drug addiction is more of a disease than a habit. Sudden cessation of the drug may cause death. Careful, skillful treatment, however, may just as readily cure. The prison "cold turkey" treatment does not cure.

All these facts were understood. Yet the drug addict was allowed to drift straight into the waiting arms of the vicious and irresponsible drug peddler. That the drug peddler was far from having a fervent desire to cure his client goes without saying.

Now then, look at the industry which has grown up in bootleg drugs, with a gross sales possibility of \$420,000,000.00 annually.

Enough drugs are imported illegally to the U. S. in one year to equal an annual income of \$1,600 for every physician, nurse, pharmacist, sanitarium, and hospital in the country. And that is a conservative estimate.

Less than a quarter of that amount of drugs supplies the legitimate medical and scientific needs of the country.

The restrictions placed upon physicians have played directly into the hands of the criminal drug peddlers; the addict has been forced into the dark, murky corners for his supply, receiving usually a grossly inferior and adulterated product. Is that cure?

Why has not the medical profession assumed the responsibility for offering at least a fair chance of cure to the ninety-four per cent of the country's addicts who are presumably otherwise honorable? The other six per cent who are criminal by occupation belong in jail because they are criminals, not addicts.

THE NEW BILL

And now the Treasury Department proposes to strengthen our narcotic laws still further.

The following line-up gives the major regulations of the pending bill. It gives reasons why they are unfair, reasons which are additional to what has just been explained in this resume. It also gives some suggestions for action.

I

Collectors of internal revenue would not be allowed to register a physician accused of being a narcotic addict.

WHY THIS IS WRONG:

1. A lay collector, not a medical board, would be empowered to pass judgment as to the habits of any physician involved.

2. It is not within the province of the Federal Government to regulate the practice of medicine within a state, which would here be the case.

3. It is not a discretionary measure; apparently no distinction would be made between an addict undergoing treatment for cure, and others.

4. For a physician to appeal the collector's refusal to register him would mean unpleasant or ruinous publicity.

II

A pharmacist who as much as suspects that a narcotic prescription sent him by a physician is not issued

in the strict course of professional practice, would not be allowed to fill it.

WHY THIS IS WRONG:

1. This invades, in a dangerous and affronting manner, the personal, confidential relationship between doctor and patient by making the druggist a censor of professional acts.

2. It gives the pharmacist authority to hold up a prescription from a sick person merely on the evidence of his own deductions.

3. It lowers the prestige of the physician, by setting up the druggist as a judge of what is, or is not, normal professional practice.

III

Every physician would be compelled to keep a record of all narcotic drugs he dispenses, no matter how small in amount, except in emergencies.

WHY THIS IS WRONG:

1. A United States court has ruled that the department has not the right to impose this requirement.

IV

Ambulatory treatment of addiction would be positively forbidden.

WHY THIS IS WRONG:

1. The government again exceeds its power in attempting to regulate the manner of practicing medicine within states.

V

Every physician must keep records of purchases of exempt narcotic preparations.

WHY THIS IS WRONG:

1. Such a record would apparently accomplish nothing and is therefore a senseless and wasteful procedure.

VI

Any physician convicted of violating any provision of the Harrison Narcotic Law, would be denied registration for from one to two years.

WHY THIS IS WRONG:

1. It would bring an unwarranted penalty down on the head of any physician who violated, however slightly or unwittingly, a provision of the Harrison act.

2. It is not discretionary, and would therefore not work in justice to all cases.

3. It would force many cases to be compromised, rather than undergo the uncertainty of court trial.

There you have the complete set of teeth, each one decidedly false from the standpoint of the medical profession. Not one holds any remedy for the present narcotic situation, and the vast illicit trade in drugs.

The most false of the lot is perhaps the regulation about pharmacists.

The almost sacred relation of a doctor to his patient, a confidence and a responsibility that should be held in reverence, receives in this provision a nasty and entirely unwarranted tap on the head.

Read it over two or three times—that Provision II. Read again just why it is wrong, why it must be opposed.

Then act.

If every physician writes his respective senator and

representative, if every county medical society and state medical association writes the Committee on Ways and Means of the House of Representatives, The Committee on Finance of the Senate, The Secretary of the Treasury, and even the President, the bill will not pass.

Don't allow another set of false teeth to go into our narcotic laws.—*Medical Economics*.

PHYSICIANS DISSATISFIED WITH PROHIBITION SITUATION

ANALYSIS OF REPLIES TO QUESTIONS ASKED OF 13,000 PHYSICIANS BY MEDICAL ECONOMICS, TO FIND OUT HOW MEDICAL MEN VIEW THE CONDITIONS BROUGHT ABOUT BY THE VOLSTEAD ACT.

The United States is determined to find out whether its attempt at Prohibition has been successful and if not, the reasons and the remedy.

Believing that physicians, due to their intimate knowledge of the lives of those in their communities, are unusually qualified to render an opinion on the virtues or faults of Prohibition, *Medical Economics* has undertaken to secure a representative and impartial opinion from the country at large.

Accordingly, the following questionnaire was mailed to approximately 13,000 practicing physicians (about 10 per cent of the total):

1. Has prohibition had a good or bad influence on the moral tone of your community?
2. Has prohibition improved the financial welfare of your patients?
3. Has prohibition had a noticeable influence on the general health of your patients?
4. Are you satisfied with present conditions?

Names were carefully chosen to give a fair cross section and to secure an index of opinion, sectionally, industrially and generally, thus:

A—*Generally*—All doctors in the capital cities of each state and of Washington, D. C.

B—*Industrially*—All doctors in textile cities: Passaic, N. J., Paterson, N. J., Lowell, Mass., and Lawrence, Mass.; in the steel cities of Youngstown and Canton, Ohio, and in West Virginia for its activity as a coal mining state.

C—*Sectionally*—All doctors in the State of Maine for the east, South Carolina for the south and Oregon for the west.

The capital cities were selected because on the whole they contain the most representative population of the state in which they are located. The leading textile cities were chosen because of the predominance of female workers and vice versa the steel cities of Youngstown and Canton, Ohio, and the state of West Virginia because of its coal mining activities, were chosen to represent the heavy industrial centers employing males almost exclusively. The reason for selecting all of the physicians in each of the three states was to make a 100 per cent canvass of all the physicians in widely separated localities. The results published in the accompanying table make a most interesting study. Generally speaking the table published herewith and the four maps showing the consensus of medical opinion

in each state on each of the four questions are self explanatory.

However, certain interesting and significant facts become evident from close observation and comparison.

For example, in the Textile centers there is a decided opinion that prohibition has improved neither moral nor financial conditions, while in the coal mining state of West Virginia the opinion on these two questions is quite favorable and in the steel and iron centers it is about equally divided. Yet, all three industrial centers report an unfavorable influence on general health conditions.

Probably, the most significant result is that indicated by a more than 75 per cent report that existing conditions are not satisfactory. Of course, this does not mean that all those indicating dissatisfaction feel that prohibition is fundamentally at fault, but rather that the failure to properly enforce it is to blame. In this connection, we quote from a few of the hundreds of replies that explained their reasons for dissatisfaction. These quotations are typical and fairly represent opinions expressed on both sides of the question.

FROM VERMONT

"I am satisfied with present conditions and expect even greater improvement in the future."

FROM MAINE

"No, I consider it (prohibition) as an unjustified personal restriction and a great failure morally, economically, and therapeutically."

"No, I never want to see the saloon or other dives and hangouts legally recognized; but would like to see beverages of all alcoholic types procurable at grocery stores and the quality and purity regulated under the Pure Food Law."

FROM BOSTON, MASS.

"The medical situation is a farce. Why limit the amount of whiskey I prescribe and fail to limit opium, digitalis, etc?"

"It is insulting to tell a physician what he may or may not prescribe. Childish to tell a whole nation, 'mustn't touch.'"

"The best law for the poor woman and for children."

FROM PROVIDENCE, R. I.

"Conditions on the whole are improved by prohibition."

FROM ALBANY, N. Y.

"I would be better satisfied if all obeyed the law. The good effect of prohibition cannot be known until obeyed."

FROM NEW JERSEY

"In the main, yes. Look for further improvements with evolution of prohibition."

"No, young college and school boys driven by the

spirit of dare get hold of semi-poisonous stuff and break other laws.

"Not at all. I feel prohibition cannot be enforced and should be left to the states to decide the question."

"No, but prohibition has accomplished its greatest purpose by making it hard for the working man to

FROM WEST VIRGINIA

"I am satisfied and note a tendency toward law observance."

FROM FLORIDA

"I do not like the ease with which otherwise good people are made into criminals by this vicious law."

New England States:	What effect on moral conditions?		Have financial conditions improved?		What noticeable influence on general health?		Are physicians satisfied with present conditions?	
	Good	Bad	Yes	No	Good	Bad	Yes	No
Augusta, Mo.	5	8	5	7	5	7	2	10
Concord, N. H.	2	4	5	2	2	5	1	6
Montpelier, Vt. ...	1	3	1	3	1	3	1	3
Boston, Mass.	77	155	95	136	63	172	36	188
Providence, R. I. ...	15	55	24	47	9	59	2	64
Hartford, Conn. ...	5	33	10	23	3	35	2	36
Total	105	258	140	218	82	280	44	307
North Atlantic:								
Albany, N. Y.	7	33	14	25	7	32	2	31
Trenton, N. J.	9	20	10	19	10	19	3	23
Harrisburg, Pa. ...	12	13	13	13	11	19	4	21
Dover, Del.	0	1	0	1	0	1	0	1
Annapolis, Md. ...	0	1	0	0	0	1	0	1
Washington, D. C. ...	33	93	40	84	28	96	10	103
Richmond, Va.	15	30	19	19	18	24	6	31
Charleston, W. Va. ...	7	15	11	10	6	14	5	13
Total	83	206	108	171	80	206	30	224
South Atlantic:								
Raleigh, N. C.	9	6	11	4	9	6	5	5
Columbia, S. C.	7	15	8	14	7	15	2	14
Atlanta, Ga.	40	72	39	61	39	70	14	81
Tallahassee, Fla. ...	2	1	2	1	2	1	1	1
Montgomery, Ala. ...	8	10	10	8	6	9	3	12
Total	66	104	70	88	63	101	25	113
South Central:								
Baton Rouge, La. ...	5	5	6	4	5	5	1	6
Jackson, Miss.	14	8	16	6	11	10	3	11
Nashville, Tenn. ...	15	21	14	24	11	26	2	31
Frankfort, Ky.	1	3	1	3	2	2	0	3
Little Rock, Ark. ...	20	11	19	9	16	11	12	12
Oklahoma City, Okla. ...	30	28	33	24	22	31	4	32
Austin, Texas	9	4	10	4	9	5	3	5
Total	94	80	99	74	76	90	25	100
North Central:								
Columbus, Ohio	44	52	52	44	44	54	17	65
Indianapolis, Ind. ...	58	80	74	71	58	86	24	98
Springfield, Ill. ...	10	12	10	11	8	12	7	13
Lansing, Mich.	8	8	12	8	6	13	4	17
Madison, Wis.	8	10	15	7	7	12	1	17
Total	128	162	163	141	123	177	53	210

West Central:	What effect on moral conditions?		Have financial conditions improved?		What noticeable influence on general health?		Are physicians satisfied with present conditions?	
	Good	Bad	Yes	No	Good	Bad	Yes	No
St. Paul, Minn.	21	48	29	34	18	48	4	55
Bismark, N. D.	1	4	1	4	0	5	0	5
Pierre, S. D.	2	1	2	1	2	1	0	2
Des Moines, Iowa. ...	41	21	48	17	36	25	22	32
Lincoln, Nebr.	34	14	40	11	27	19	13	26
Topeka, Kansas	24	8	26	7	18	9	12	14
Jefferson City, Mo. ...	1	7	1	7	1	7	0	8
Total	124	103	147	78	102	114	51	142
Mountain States:								
Santa Fe, N. M.	2	2	2	1	2	1	1	3
Denver, Colo.	65	80	80	69	58	87	29	97
Cheyenne, Wyo.	4	4	4	3	4	4	1	5
Helena, Mont.	0	4	1	3	1	3	0	2
Boise, Idaho	5	4	5	3	5	4	1	7
Salt Lake City, U. ...	28	27	39	17	28	26	16	26
Phoenix, Ariz.	8	9	10	6	8	9	4	7
Total	112	130	141	102	106	134	52	147
Pacific States:								
Sacramento, Calif. ...	11	22	18	15	11	21	4	20
Salem, Ore.	7	2	8	3	6	4	4	5
Olympia, Wash.	0	4	1	3	0	4	0	4
Total	18	28	27	21	17	29	8	29
Textile Cities:								
Passaic, N. J.	6	12	8	11	8	11	1	13
Paterson, N. J.	6	16	8	16	6	18	2	18
Lowell, Mass.	6	11	6	11	5	12	3	8
Lawrence, Mass.	2	10	8	6	1	11	2	7
Total	20	49	30	44	20	52	8	46
Iron and Steel Cities:								
Youngstown, Ohio. ...	14	15	13	15	9	20	4	17
Canton, Ohio	17	15	18	13	15	15	11	16
Total	31	30	31	28	24	35	15	33
West Virginia	145	138	160	124	108	175	58	168
Maine	79	86	86	83	54	118	27	136
South Carolina	124	79	125	79	94	108	43	108
Oregon	128	94	149	82	99	123	36	146
GRAND TOTAL	1257	1547	1476	1333	1048	1742	475	1909

FROM TENNESSEE

"I think there should be some modification so the 'stuff' should pay taxes."

FROM WASHINGTON, D. C.

"I am in favor of wines, and beer, and even whiskey under governmental supervision but opposed to saloons."

"No, repeal 18th Amendment and establish Canadian type of supervision."

"The remedy lies in drastic enforcement of the present law and not in lessening their stringency."

FROM GEORGIA

"Those who want it still get it. The Swedish law should be adopted."

"It is making a nation of hypocrites and law-breakers."

FROM OHIO

"I would like to see more strict enforcement and get the boozers out of office."

"Unalterably No! for it has prostituted our profession by attempting to make us 'go-betweens.'"

"No, the character of men employed to enforce it is deplorable and people are taught to be liars and thieves."

FROM IOWA

"90 per cent of people would violate the law except for the fear of the undertaker."

FROM INDIANA

"Yes, (satisfied) except that physicians should be able to prescribe alcohol when indicated."

"Better conditions. Less child neglect."

"Prohibition is a step in the march of civilization."

"Prohibition has caused more graft, theft, and murder than any other law put on the statute books."

FROM ARKANSAS

"The 18th Amendment is O. K. The whole South has been benefited by prohibition, wet New York and New Jersey to the contrary. Shame on them."

FROM MINNESOTA

"Conditions would be much improved if light wines and beer could be had."

"The law must be rigidly enforced. 'Old Soaks' must die off. Bootleggers are foreigners and should be deported."

FROM WASHINGTON, D. C.

The consensus of opinion among Washington physicians is that prohibition's effect on morals and general health has been decidedly bad and that there has been no improvement in the financial welfare of the people. Ten out of every eleven Washington doctors express dissatisfaction with existing conditions.

FROM CALIFORNIA

"Yes, (satisfied) would that I had more than one tongue to urge Senator Edwards and Governor Smith (N. Y.) to reform and legislators to deport Greek, Italian, Slavonian and Mexican violators."

FROM OREGON

"Modification without saloons. Revenue should go to highway systems."

FROM COLORADO

"Prohibition is a failure. Temperance under Federal supervision and less noise is desirable."

"If the 'old soaks' want their liquor let them drink

it and die. Stop the yelling of a noisy minority."

Having taken a geographical cross-section of the country for the purpose of obtaining a composite picture of medical opinion it might be well to view the picture as a whole and see what the prominent features portend.

Medical Economics has no intention of leaving its readers up in the air. But in coming back to earth let us see what the chances are for landing on our feet on solid ground.

We have seen that physicians differ widely in their individual interpretation of the influence of prohibition on the moral tone of their communities; in its effect on the financial welfare of their patients; in its effect on general health; and last but by no means least, we have seen that an overwhelming majority is dissatisfied with present conditions.

Running our eye down quickly from No. 1 to No. 4 we see that prohibition has had a bad influence on the moral tone of most communities. Moral, in the sense here used has reference to obligation to duty and making a distinction between right and wrong. No. 2 indicates that there has been a slight change for the better in the general financial welfare, particularly in industrial sections. Some of the money that was formerly absorbed by the corner saloon has undoubtedly found its way into local banks. No. 3 says emphatically that there has been very little effect on the general health. No. 4 simply reiterates what everyone will concede, that only a hopeless minority is satisfied with present conditions. The wets want it wetter and the dries want it dryer.

Those physicians who favor prohibition are solidly on the side of law enforcement and are to be highly respected for their courage and perseverance. Those physicians who favor the repeal of the Volstead Act are firmly convinced that the public and a majority of politicians never will sanction strict enforcement and that the law itself is doomed to everlasting disrespect.

Whatever the ultimate outcome may be, wet or dry, physicians will be found just where they have always been—at the elbow of suffering humanity regardless of whether that suffering was caused by uncontrollable circumstances or by indiscretion, and warning the public when need be of the folly of excess.

"HOW MUCH IS YOUR FEE, DOCTOR?"

BY A CALIFORNIA SPECIALIST

"How much is this operation going to cost me, Doctor?"

"Well, I am going to charge you, for giving you the skill I have worked 20 years to acquire, and for the knowledge which I have studied years and spent thousands of dollars to gain, as well as for some half dozen hours of my time, used in examining, operating and dressing—for this I am going to charge you the same amount the automobile dealer charged you for taking you to ride in his demonstrator, and talking you into buying one of his cars. He actually spent less time on you than I spent and certainly spent less than I on his education and training. As to taking responsibility,

he took none—he had nothing to lose except his time and a small portion of his overhead expenses. I had your life in my hands: and there were moments, during the operation, when that responsibility weighed heavily. Do you consider that he rendered you a greater service than I? It certainly cost him less of his vital force to render it. You feel that I am taking great advantage of you when I charge you \$200 for putting your body in the best repair of which it is capable; but you are pleased and happy to pay him \$200 for persuading you to buy his brand of car. I realize that it seems to you that in one case you are paying for personal service, which gives you no pleasure, and in the other case for merchandise, for goods you can actually see and feel and which do give you pleasure. But you should also look at it from the viewpoint of the motor car dealer and myself.

"Similarly, for the care I give your wife throughout pregnancy—for the numerous examinations and for the encouragement and heartening I try to give her—for the disturbance of my rest in the dead of night, for the hours of waiting, with eyes heavy for want of sleep—for taking the responsibility of doing the very best for mother and babe and for watching and guiding them through the first 10 days of the babe's life; for all this, I am going to charge you the same amount as the piano dealer who talked with you for an hour on two or three occasions, very courteously explained to you the superior points of this piano and finally drew up the contract and made you the sale. You never thought he was asking too much of you, because you never really considered him as asking you anything for his service. You were paying \$400 for PIANO and it did not seem to you unreasonable. If the salesman had charged you even \$10 for his personal services in showing you the pianos, you would have been indignant. But with the impersonal thing, the piano, and its value as merchandise and not as service, you feel no resentment nor injustice.

"You simply do not stop to analyze. You do not realize that you are paying anything for personal service when you buy merchandise. Besides that, when you pay for medical service, you are usually 'paying for a dead horse.' You have already had the relief from pain, or from anxiety over sickness. With your car, you are paying for pleasure which you are going to enjoy or which you are still enjoying. If you were obliged to pay your doctor bill before you got relief from discomfort, you would pay more eagerly and willingly.

"For all the calls I made at your house when you had the flu; for giving my most careful thought as to the best way of managing your illness; for exposing myself to possible contagion or six hours of actual time I spent calling on you and going to and from your home, and for the various supplies I expended in treating you, I am going to charge you the amount which you put into the radio dealer's 'profit account' to compensate him for having placed his receiving set in your living room. Remember, I'm not talking about the cost of the set, but what you paid him to induce you to choose it.

"Am I fair? Or am I an extortioner? For my services to the community year in and year out I am not demanding any more than the head of your bank, nor than your successful realtors or your merchants—often less. I usually work more hours than they do; and I never consider my own comfort.

"Do you really think that I am a 'Grafter?'—*Medical Economics*.

LEADING CAUSES OF DEATH

United States Registration Area, 1923:

Causes of Death	Rate per 100,000
Heart Disease.....	175.3
Pneumonia	109.0
Tuberculosis	93.6
Cerebral Hemorrhage and Softening of the Brain.....	90.4
Nephritis	90.1
Cancer	89.4

In the foregoing table cancer stands sixth in the order of the most frequent causes of death; but as a disease of adult life, which is independent of any other disease, it stands not only first, but alone. Heart disease is usually the result of some other disease or condition. Pneumonia is often a terminal infection superimposed upon another disease. Tuberculosis causes fewer deaths among grown people than does cancer. The diseases grouped under "nephrit" is, "cerebral hemorrhage and softening of the brain" are, to a considerable extent, due to preceding infections.—*Bulletin, American Society, Control of Cancer*.

QUESTIONS PUZZLING THE DOCTOR

What is the exact moment when today becomes tomorrow? Does the change in the date come with the first stroke of 12 midnight, or does it come when the final stroke is rung? And further, what if the clock were even 10 seconds slow or fast?

These are questions puzzling Dr. Geo. K. Worden of Alton, who brought a baby into the world at the home of Dr. O. A. Meyer, assistant state veterinarian.

Dr. Worden has the duty of filing the birth certificate, but both he and the father of the little girl are puzzled by the question of a birth date. Was it Tuesday, August 10, or was it Wednesday, August 11.

Dr. Worden says that the baby was born on the stroke of 12 midnight. The clock in the home of Dr. and Mrs. Meyer was striking the hour. Thinking the clock might be wrong, Dr. Worden hastily consulted his watch. It also showed exactly midnight. But even then either clock or watch might have been a few seconds fast or slow, and the matter of the birth date was in this instance to be decided by seconds.

"I never knew of such a case before," said Dr. Worden, "I guess there is a definite rule as to when one day ends and the next starts, but I feel just a little bit uncertain about it, and have not yet come to a decision."—From Madison County Doctor.

Or, if you are finicky, how about "sun" time, standard and summer saving time?

Correspondence

MEDICAL RELIEF IN DISASTER

Monmouth, Ill., Aug. 16, 1926.

TO THE EDITOR:

I am enclosing herewith a copy of the report of the Committee on Medical Relief in Disaster, adopted by the House of Delegates of the American Medical Association at the Dallas session. Copies have been sent to all County Society Secretaries in order that there may be no time lost in perfecting the organization so that it can function on short notice, in case of disasters. Each County Secretary is urged to submit the report to his Society and that he then report to the Secretary of the State Society, and to the Secretary of the American Medical Association.

The American Red Cross has assured the A. M. A. that they will heartily cooperate in the program. In the "Red Cross Courier" of August 16, 1926, the proposed plan is written up in detail and favorably commented, and an assurance given that the Red Cross will heartily cooperate.

It is hoped that every County Medical Society in Illinois will act favorably on the proposition and report as soon as possible, as requested.

Yours very cordially,

HAROLD M. CAMP,

Secretary, Illinois State Medical Society.

Following is the communication on medical relief:

REPORT OF COMMITTEE

on

MEDICAL RELIEF IN DISASTER

Adopted by the House of Delegates of the American Medical Association and referred to constituent State Medical Associations and their component County Medical Societies for consideration and action.

MEDICAL RELIEF IN DISASTER

It has always been difficult to perfect a smooth-working and efficient organization for relief in times of great disaster when it has been attempted under the stress of the moment. In such times everybody wants to help, but, acting on impulse and under excitement, with appeals for aid coming from every quarter, and without any directing head, even those most anxious to render helpful service are prone to make mistakes that lead to harmful results and to produce complication that make it difficult to organize the machinery necessary for orderly and effective relief. This is true whether applied to efforts for medical relief or to those made for providing for other needs of the victims of disaster. When an organization established

for the purpose is first on the ground, or is there soon enough to forestall any serious complications created by well-meaning but untrained volunteer workers, it is always easier to carry out necessary measures for relief in an efficient manner. That is why the House of Delegates approved the report of a Committee on Medical Relief in Disaster, submitted at the Dallas session. This report is submitted to constituent state associations and component county societies in the hope that, through them, organization will be effected within the American Medical Association that will insure adequate medical relief for the victims of disaster, wherever they may strike.

REPORT OF COMMITTEE ON MEDICAL RELIEF IN DISASTER

This is an outline of a plan for immediate medical relief, by the American Medical Association in cases of disaster.

The reason for suggesting this is the confusion and often breakdown that occurs immediately after any large disaster, before the established state and national organizations which properly take charge of such situations arrive on the scene. This immediate difficulty is due largely to the fact that, except in the larger centers, there is apt to be no organization or individual with any authority for taking charge of these situations and directing the immediate work of medical relief. The suggestion of this plan has been made by medical officers of disaster relief of the American Red Cross with the hope that through it these immediate difficulties can be overcome and that co-operation with the Red Cross can be made more effective.

The purpose is to provide an organization that can immediately function in the case of disaster by reason of its having a medical man designated in each county of the country who shall be deputized by the American Medical Association to act at once in organizing and directing immediate medical relief. He is to assume direction of medical relief until the properly constituted authorities or other recognized state or national organizations arrive and assume charge. It is not intended that this organization shall take permanent charge or that it shall take over the functions of the bodies provided by the state and federal governments, including the Red Cross. Its function is primarily to furnish immediate medical relief in the interval before the usual organizations arrive. After their arrival, this organization is expected to put itself under their direction or control or cease to function, except in the unlooked for situation where the organizations properly looked to so fail to meet their obligations that independent action is necessary to prevent suffering. It is to be hoped, and it is our expectation, that this organization will be able to co-operate both before and after their arrival with the state and federal organizations for relief, and with the Red Cross.

It is not its function to take charge of railroad disasters or of any other sort of industrial disasters where the corporation involved has its own organization to act immediately in these disasters. The function of this organization, in short, is not to take over medical relief in situations in which organized machinery to take care immediately of disasters already exists. Its

purpose is to provide systematic direction for relief only in those situations in which, for the time being, no adequate organization exists for performing this function.

The plan particularly has in mind disasters of such magnitude that they temporarily break down the ordinary machinery of the community for medical relief and call for the sudden demobilization of the medical profession of the community in order to cope with unexpected situations. The necessity for this may arise in a city as well as in a small community.

The essential thing in such a plan is that there should exist potential machinery that can immediately be called on to act in the event of disaster. Disasters such as would call on this organization are fortunately so rare that any special organization that existed for this purpose alone would be very difficult to keep alive because of lack of demand for its services. It would seem, therefore, that the best plan would be to attach this function of disaster relief in each community to one of the regular officers of the constituent societies of the state medical associations. The officers on whom it would seem best to put this responsibility are the presidents of the local societies. They are representative men in their towns and counties, are chosen heads of the profession and, in the nature of things, have its confidence.

The plan, then, would be that the American Medical Association should direct that immediate supervision of medical relief, until taken over by the proper organizations, should be a function of its officers as follows:

In counties: the president of the county medical society. Where more than one county is represented in a single medical society, the director of disaster relief should be the president of this society.

The state director of disaster relief should be the president of the state society.

The national representative of the American Medical Association for disaster relief, it would seem, should be some one who is in the headquarters of the American Medical Association and, who, therefore, could always be reached promptly. And it would seem that the proper officer to represent the American as director of disaster relief should be the general manager or secretary of the Association, who should act, as far as possible, with the aid and advice of the President of the Association.

The functions of the county or local director of disaster relief would be to assume charge—act as captain—in systematizing, directing and controlling activities in immediate medical relief. He should feel that he is responsible for the direction not only of the local members of the profession but also of volunteers who come in. The great difficulty in these situations is that no one under present conditions feels that he can with propriety assume direction. Under this plan the president of the county medical society not only could with propriety assume direction but should be expected to do so by the members of the profession.

The president of the county or district society should be allowed, if he wishes, to deputize the direction of re-

lief to another member of the profession of his choice. If he does this it should be done formally and publicly, and this act should give his deputy full authority to act in his place.

The functions of the president of the state medical society as state director should be to see that the presidents of the county societies live up to their responsibilities, to co-operate with them in every way possible, and to act as a central officer through whom, in necessity, the national director of medical relief in disaster or any outside organization could take up matters, particularly matters that they desired to bring to the notice of the members of the profession as a whole.

The national director of medical disaster relief should have functions similar to those of the state directors for the country as a whole.

The Secretary or the General Manager of the Association as national director and the presidents of the state societies as state directors should be liaison officers between the national headquarters of the Association, state headquarters and the component county societies.

An immediate function of theirs, in case this plan is adopted, would be to see to it that the presidents of the local societies and the profession of the country become acquainted with this plan of organization, and that in the event of disaster the president of the local society is to be looked to as the director in charge of medical relief until the proper authorities appear to take control.

This information should not only be given on the adoption of the plan, but should be repeated from time to time, until the plan becomes a tradition and in disaster the profession and the public come naturally to expect the president of the county medical society to take immediate charge and to expect the medical profession to act under his direction as long as the immediate necessity exists. To this end information of this plan should be promulgated repeatedly through *The Journal of the American Medical Association*, through the AMERICAN MEDICAL ASSOCIATION BULLETIN, through the state medical journals and societies, and by such other means as may be effective.

IODIN TREATMENT OF GOITRE

Eugene Bircher advances the following basic principles for the future non-operative treatment of goitre: 1. The careful use of iodine. 2. The injurious by-effects of iodine must be minimized or prevented by the use of counteracting remedies, such as calcium and quinine, and possibly phosphorus. 3. In the large group of individuals who show an idiosyncrasy to iodine, the iodine must be entirely replaced by other remedies, among which silica and phosphorus seem to be the most promising; possibly other halogens (bromine) or the metalloids (arsenic and mercury) may also be of use. 4. In general, a varying combination therapy with or without iodine, with quinine and its derivatives, silica and phosphorus, is advisable in goitre, each case of which must be judged individually.—*Klinische Wochenschrift*.

Original Articles

POSTERIOR MEDIASTINAL ABSCESS IN TUBERCULOSIS OF THE DORSAL SPINE*

A. STEINDLER, M.D., F.A.C.S.

IOWA CITY, IOWA

The dorsal segment is involved in over 50 per cent of all cases of tuberculosis of the spine. Abscess formation is a complication of dorsal tuberculosis and is of equally frequent occurrence, the percentage being variously estimated at about 45 per cent and more.

Of these abscesses a certain not inconsiderable percentage projects into the thoracic cavity and may therefore be designated as mediastinal. In the writer's series of 280 cases of tuberculosis of the spine, 23 or 8 per cent showed abscess formation in the posterior mediastinum, or 15 per cent of all cases of dorsal tuberculosis.

The clinical differentiation between a simple prevertebral abscess lying underneath the anterior longitudinal ligament, and an abscess actually protruding into the posterior mediastinum is not always easy. It is safe to assume, however, that upon reaching a certain size and form the abscess must necessarily bulge forward between the layers of the parietal pleura, pushing before it the anterior longitudinal ligament.

Often the mediastinal abscess remains quiescent for a considerable length of time and it is only when it has reached a certain size that symptoms arise from the extension of the abscess to neighboring structures. The clinical study of the mediastinal abscess in Potts' disease is, therefore, principally a study of its growth and extension.

In the lower cervical spine abscesses coming from the neural arches follow in general the path of the scaleni along the loose areolar tissue which covers the plexus. Abscesses coming from the vertebral bodies are retained by the anterior longitudinal ligament of the spine and, being deflected laterally, likewise follow the path of the scaleni. They appear then at the lateral cervical triangle above the clavicle.

In the upper cervical region the abscess bulges forward into the retro-pharyngeal space; from

the 3rd cervical down it is deflected laterally toward the lateral triangle of the neck.

The abscess coming from the mid-dorsal vertebral bodies protrudes against the posterior mediastinum and the comparative elasticity of the anterior and lateral boundaries permit the abscess to remain sessile and to assume large dimensions. Anteriorly, toward the retromediastinal space the esophagus, trachea, and the aorta are the principal structures. Of these the esophagus is especially interesting because of its comparative freeness, whereas aorta and vena cava remain closely connected and attached to the vertebral column. The abscess developing at the cervico-dorsal junction will press before it the esophagus against the trachea in front. But from the level of the 4th dorsal vertebra down to its entry into the diaphragm the esophagus recedes from the spinal column, being loosely connected with the latter and is therefore easily displaced forward. Between the kyphotic dorsal spine in the back and the freely movable esophagus in front, there appears then a triangular space which permits the accumulation of considerable amounts of pus. This triangular space is of special importance for the location and growth of the retro-mediastinal abscess.

Lateral Extension of the Mediastinal Abscess. Protruding between the thoracic wall and the parietal pleura the abscess easily gains the site of the vertebral articulation of the ribs and from there on passes laterally in the narrow triangular space formed along the ribs between the internal and external intercostal muscles. It may occasionally appear on the surface in the intercostal spaces, making it difficult to distinguish the condition from caries of the ribs.

Posterior Extension. Winding its way around the bodies of the vertebrae, and penetrating between the layers of the long muscles of the back, the pre-vertebral or retro-mediastinal abscess may appear on the surface laterally to the spinous processes as a flat, long fluctuating mass.

Extension Into the Spinal Canal. The most ominous route of extension of the retro-mediastinal abscess, however, is that into the spinal canal. By erosion of the vertebral bodies the abscess may extend under the posterior longitudinal ligament of the vertebral bodies and by bulging the latter forward it may cause considerable pressure upon the spinal cord. This is the most fre-

*Read before the Section on Surgery, Illinois State Medical Society, Champaign, Ill., May 19, 1926, and illustrated by slides.

quent complication of the retro-mediastinal abscess and the one which most peremptorily demands active interference because of the grave symptoms which result from pressure upon the spinal cord.

Forward Extension. Increased pressure of the abscess will finally produce pressure upon the bronchial tree with respiratory embarrassment or pressure upon the esophagus with difficulties of deglutition; but the latter event is rare because of the already described mobility of the esophagus which allows ample space for the growing abscess. Perforation into the pleural cavities and into the pericardial sac are likewise of much rarer occurrence. It is most common that the growing abscess under increased pressure extends along the thoracic wall, or, by erosion of the vertebral bodies, into the spinal canal.

Downward Extension. We find that the diaphragm is a very effective barrier to downward extension since the openings of either esophagus or aorta or vena cava are unsuitable for extension. The one for the esophagus is a tight muscular ring as is also the one for the aorta, while the foramen of the vena cava lies in the tendinous portion of the diaphragm. So the only route of extension is underneath the longitudinal ligament or through a space formed by the crura medialis of the diaphragm and the muscle bellies of the psoas which lie between them, since the psoas reaches up to the body of the 12th dorsal, while the diaphragm descends down on both sides to the 3rd and 4th lumbar bodies respectively. The abscess is, therefore, forcibly retained within the thoracic cavity—a factor which contributes greatly to the inter-thoracic abscess pressure and to the invasion of neighboring structures along the routes which have been described. Only in one case of the series was there a true extension of the abscess from the thoracic cavity below the diaphragm.

A number of interesting cases are selected from the series:

1. *Mediastinal abscess extending along the thoracic wall.* No. 6784, M. B., girl of 8 years of age, Nov. 27, 1921.

Pain, stiffness and tenderness of back since July. Upper dorsal tuberculosis. X-ray shows erosion of the 3rd and 4th dorsal vertebrae with mediastinal abscess below. Erosion of the 3rd, 4th and 5th ribs on the right side. Mediastinal abscess reaching to

upper aperture of the thorax. This case was treated by extension and recumbency.

No. 8154. B. E., man aged 54 years, Oct. 4, 1922.

Sharp pain in back since June, pain is referred to lower ribs; rigidity of spine. Increased knee reflexes and ankle clonus. Mid-dorsal gibbus with apex over 7th and 8th dorsal. X-ray shows destruction of 6th dorsal with large mediastinal abscess. Patient treated with recumbency. Died of bronchial pneumonia Feb. 11, 1923. The autopsy showed tuberculous destruction of the 6th dorsal with a large abscess reaching upward and destruction of the 3rd, 4th and 5th ribs on both sides. The ribs are completely detached from the vertebrae by loss of head and neck and bathed in greenish pus.

2. *Mediastinal abscess extending upward and forward.*

No. 8174. A. H., woman aged 27 years, Oct. 15, 1922.

Pain in the right side since October, 1921, followed by pain in the back. Gibbus at the level of the 12th dorsal with radiation of pain in upper right quadrant. Exaggerated K.K. and ankle clonus. X-ray shows destruction of 11th and 12th dorsal with a large mediastinal abscess. Treated by recumbency and traction, but went from bad to worse and died shortly after her dismissal home. This case also shows subdiaphragmatic extension and is the only mediastinal abscess in the series extending below the diaphragm. No attempt was made to drain the abscess.

No. 13,404. K. S., boy aged 3 years; Nov. 7, 1925.

Following influenza had cough and shortness of breath. Deformity of spine since June, 1925. Night cries. Cervical adenitis. Moderate gibbus, 5th to 7th dorsal. Stiffness of the spine. Normal reflexes. X-ray shows destruction of 6th, 7th and 8th dorsal with a large mediastinal abscess. This abscess was constantly increasing; there were repeated attacks of respiratory embarrassment of asthmatic kind. May 12, 1926, he died during an attack of severe asphyxia. Autopsy showed a very large mediastinal abscess from the 8th dorsal upward, pushing before it and flattening out the esophagus and compressing the trachea. Perforation of the vertebral bodies and invasion of the spinal canal; no cord symptoms. The question of drainage of this abscess by costotransversectomy was discussed but because of the indefiniteness of symptoms it was not undertaken. There was displacement of the aorta to the left and backward, which would have made the operation a very hazardous procedure. (Fig. 1, 2.)

3. *Mediastinal abscess extending into the spinal canal with symptoms of cord compression.*

Not less than 14 out of 23 cases showed definite paraplegia from extension of the abscess or of tuberculous granulation into the canal and subsequent pressure upon the cord. Report of selected cases:

No. 4405. G. P.; male aged 43 years; March 8, 1920.

Suffered from back pain since November, 1918, pain radiating to upper abdomen. Increasing loss in use

of legs noticed since Jan. 1, 1920. Gibbus at 8th dorsal. Spine rigid with marked spasticity of both legs and increased reflexes. There was also loss of pain sensation below the umbilicus. X-ray shows destruction of 8th to 10th dorsal vertebral bodies with a large retro-mediastinal abscess. This patient also had a severe attack of cyanosis and cardiac syncope from which he

ness and weakness of legs and difficulty of urination. X-ray shows involvement of the lungs, destruction of the 1st and 2nd dorsal vertebrae and a large mediastinal abscess from the 1st to 5th dorsal. On Feb. 4, 1925, costotransversectomy was done with removal of the 2nd and 3rd transverse processes and costal heads on the right side. A considerable amount of pus was drained. This patient showed marked improvement of the spasticity.

No. 13,083. D. W., aged 26 years; Dec. 12, 1925.

Suffered from soreness of back with radiation around left side for two years. Since June, 1925, his legs became weak and numb. He had bilateral ankle clonus, increased K.K. and marked spasticity. Gibbus at 6th dorsal. X-ray shows destruction of 4th-7th dorsal vertebral bodies with a large mediastinal abscess. Laminectomy from the 4th-9th dorsal was



Fig. 1. Case K. S. Retro-mediastinal Abscess.

rallied. In July, 1921, a fusion operation was done and patient made good recovery.

No. 9746. L. M., female; aged 29 years; Oct. 4, 1923.

This patient suffered from tuberculosis of the spine for 15 years. Recovered and had a free interval of 10 years. In 1919 pain in back recurred and she complained of weakness in her limbs. Gibbus of the five lower dorsal vertebrae, but normal reflexes and no muscle spasm. X-ray shows destruction of lower dorsal vertebrae with a large mediastinal abscess. A fusion operation was done October, 1923, and while recovering from this there appeared rapidly increasing signs of spastic paralysis which soon changed to flaccidity. Laminectomy was done December, 1923, over the lower dorsal spines and a small abscess with granulation tissue was encountered in the extra-dural space. Following operation the paralysis gradually receded and patient made good recovery.

4. *Drainage of the Mediastinal Abscess by Costotransversectomy.*

No. 11,642. E. S., male, aged 27 years; Nov. 26, 1924.

This patient suffered from pain of the spine since August, 1923, following paratyphoid. March, 1924, diagnosis of mediastinal tumor was made. Back pain radiating into arms and since November, 1924, numb-



Fig. 2. Case K. S. Perforation into spinal canal.

performed, November, 1925, and showed a sharp kink of the cord, but it failed to relieve the paraplegia. Jan. 19, 1926, costotransversectomy was done at the 6th-7th rib on the left side. No pus encountered but a moderate pneumothorax resulted. Probably due to the negative pressure from pneumothorax, the compression symptoms of the cord were relieved after operation. He made gradual and steady recovery and is now walking without difficulty.

No. 11,802. H. G., male, aged 27 years; Nov. 28, 1924.

Pain in the back since March, 1924. Weakness of legs and numbness. Gibbus at 6th-7th dorsal. X-ray shows destruction of the 7th dorsal with large mediastinal abscess. A fusion operation was performed December, 1924, 1st lumbar to 4th dorsal, but failed to improve the paraplegic symptoms. Costotransversectomy was done on left side and a large amount of pus evacuated. Patient, however, went from bad to

worse and died shortly after operation. The autopsy showed a large retro-mediastinal abscess communicating with the spinal canal. (Fig. 3, 4.)

No. 13,620. E. V., aged 5 years; Dec. 27, 1925.

Back pain for two years. Deformity since 6 months ago. Gibbus 5th and 6th dorsal. X-ray shows destruc-



Fig. 3. Case H. G. Retromediastinal abscess anterior and posterior walls.

tion of 5th and 6th dorsal and a large mediastinal abscess. No paralysis. Costotransversectomy done March 26, 1926, with resection of 5th rib and transverse process, right. Evacuation of pus. Improvement in general condition three weeks after operation.

No. 14,002. J. A., man aged 45 years; April 9, 1926.

Inability to walk since six weeks. Active incontinence of bowels and bladder. Very spastic. Sensory disturbances from below umbilicus. No gibbus. X-ray shows destruction 6th-9th dorsal with large mediastinal abscess. Costotransversectomy done April 16, 1926, 5th and 6th ribs and process, right side. No pus is reached. Condition is unchanged on discharge two weeks later.

Of the five cases in which the costotransversectomy was performed for drainage of the mediastinal abscess, in three the drainage was successful and considerable amount of pus evacuated. Of these two recovered, one with disappearance of the paraplegic symptoms and one not paralytic showed general improvement. Of the two cases in which pus was not evacuated one made almost complete recovery of the paraplegia, while in the other there was no improvement of the paralysis during the short time of observation. It seems to us that the costotransversectomy is the rational and necessary procedure in certain cases of mediastinal abscess, with or without spinal compression. We believe that

in a number of cases a timely operation with evacuation of the mediastinal abscess would save the patient's life.

The technique of the operation is not extremely difficult. One proceeds to the transverse processes by the stripping maneuvers used in the Hibbs fusion; the transverse process is chiseled through at its base and head and neck of the ribs are removed periosteally. It is well to proceed toward the depths under the guidance of the finger to feel of the soft resistance of the abscess, and when operating on the left side to



Fig. 4. Case H. G. Erosion of laminae.

ascertain the position of the aorta. Where the abscess presents itself directly under the rib, a lesion of the pleura with pneumothorax is not quite so likely to occur.

It is obvious that the location of the abscess should be carefully ascertained by puncture and aspiration before it is incised.

Of the 23 cases of mediastinal abscess under observation for periods ranging from a few months to five years, 8 or 33 per cent are known to be dead; two or three were discharged in a condition which made the outlook for life very

unfavorable, giving a probable total mortality of 50 per cent. Three of the eight cases died of meningitis; four of cachexia and amyloid degeneration and one from asphyxia probably due to compression of the trachea.

The principal indication for the costotransversectomy was paraplegia. It is significant that the laminectomy failed to relieve the paraplegia in three out of four cases. In cases of mediastinal abscess with paraplegia, on the other hand, costotransversectomy relieved the spinal compression in two cases and failed to relieve it in two others. From the evidences gained at autopsy where the communication between the mediastinal abscess and the spinal canal could be demonstrated the evacuation of the posterior mediastinum by costotransversectomy would appear a thoroughly rational procedure.

THE DIAGNOSIS AND TREATMENT OF
BLADDER TUMORS.*

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CHICAGO

This paper is not written for the urologist but is intended for the general practitioner who is the first one to be consulted by the patient with a bladder tumor. The subject has become rather complex and an effort will be made to review our present information in regard to it, in the simplest possible manner.

1. *Varieties of bladder tumors.* For practical purposes it is important to remember (see Fig. 1) that about 90 per cent of all bladder tumors belong to the epithelial type, *i. e.*, arise from the mucous membrane of the bladder or extend into it from adjacent structures. The remaining 10 per cent include benign neoplasms like fibromyoma angioma, adenoma and more malignant ones such as sarcoma, sarcomatocarcinoma, etc. These 10 per cent interest chiefly the urologist so that we will limit our description to the other 90 per cent. Of the latter about 40-50 per cent represent the simple papilloma. This occurs either as a single or multiple (about one-third) growth and again as one either with a distinct stalk or pedicle or without much of a pedicle *i. e.*, as a sessile tumor. In addition to the simple, benign papilloma we have the papillary carcinoma and the infiltrating carcinoma as

the remaining forms of the epithelial type of bladder neoplasms. Of these two latter varieties, the papillary carcinoma occurs more frequently than does the infiltrating. The papillary carcinoma may be a malignant tumor from its onset but more commonly it is the result of changes in the benign papilloma. The infiltrating form differs from the other two epithelial types in invading the deeper coats of the bladder wall at a comparatively early stage and is far



Fig. 1. Relative frequency of the epithelial type of bladder tumor as compared to that of the type which is of connective tissue and heterotopic origin.

more likely to be complicated by metastases than the papillary carcinoma. The importance of these pathological data cannot be underestimated from a clinical standpoint as we shall see later when we take up treatment.

Clinical pictures and diagnosis. Bladder tumors present one or a combination of the following predominant symptoms:

1. Hematuria.
 2. Symptoms like those of an acute or chronic cystitis.
 3. Symptoms of bladder neck obstruction.
1. *Hematuria.* The bladder is the seat of about 40 per cent of all bleeding from the entire genitourinary tract and of all bladder lesions which can give rise to bleeding, tumors constitute the majority.

Of 156 bladder tumors seen at the Brady Urological Institute, hematuria was the first sign in 117. Of 138 similar cases observed at the Memorial Hospital (New York) it was the

*Read May 18, 1926, at the Annual Meeting of the Illinois State Medical Society.
From the Urologic Service of Michael Reese Hospital.

initial symptom in 130. This cannot help but impress one with our duty to the patient and that is to have a complete urologic examination made at the earliest possible moment to determine whether or not a bladder tumor is the source of the hematuria.

2. *Symptoms of cystitis.* These are chiefly burning, pain, frequency, dysuria and pyuria. There is nothing in these to stamp them as characteristic of bladder tumors and yet, although they are not as constant in the early stages as hematuria, one must bear in mind the possibility of a bladder tumor being the underlying cause, in every patient above middle age whose cystitis symptoms or pyuria are not to be explained in other ways.

3. *Obstruction.* As an initial sign of bladder tumors this is not very common. When we

it be of the pedunculated or sessile type. How to tell whether malignant changes, *i. e.*, into a papillary carcinoma, have occurred is not so easy especially if the tumor is large or located at the vertex of the bladder or around the internal urethral meatus.

The following are at present the generally accepted cystoscopic evidences of malignancy in a papilloma:

- (a) Edema around its base.
- (b) Clubbing of the villi and a flattening of the growth.
- (c) Necrosis (B of Fig. 2) or incrustation of the tumor.
- (d) Tendency to recur after fulguration.

These are by no means infallible and often one is dependent on the clinical behavior alone, *i. e.*, if the papilloma recurs after fulguration or

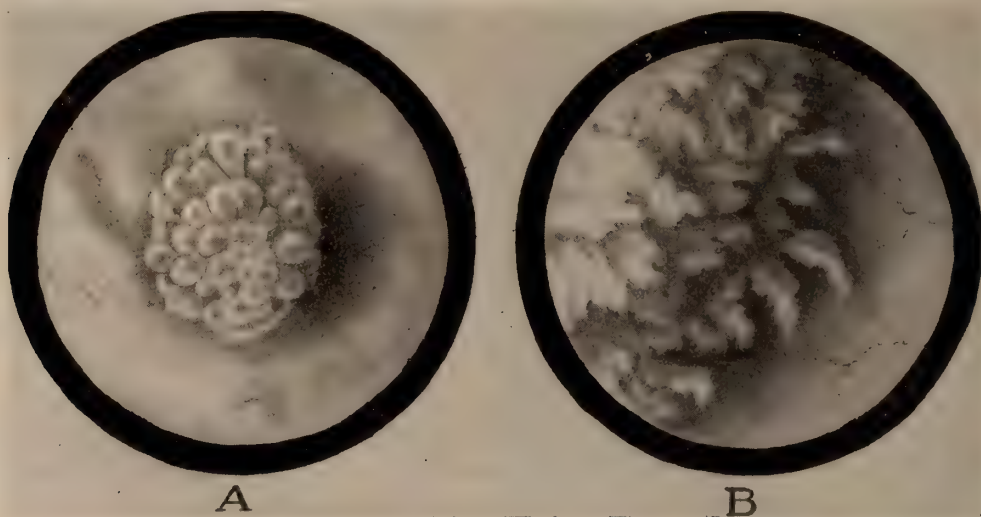


Fig. 2. Cystoscopic views of a benign (A) and of a malignant (B) papilloma of the bladder.

recall that about 10-15 per cent of all tumors which present vesically are primary in the prostate, it is not difficult to understand why an obstruction could not be an early symptom.

Cystoscopic Diagnosis. This is the most valuable method but its application may at times be very difficult because of the constant hematuria and the pain. These obstacles can be overcome to a great extent by (a) employment of a cystoscope which permits of a more or less constant irrigation of the bladder so that a clear field can be secured and (b) by the use of caudal or epidural anesthesia. We can recognize very easily through the cystoscope, the fronds or villi of the benign papilloma (A of Fig. 2) whether

radium, malignancy is to be strongly suspected.

Excision with a cystoscopic specimen taker of a portion of the growth is neither advisable nor does it always yield the necessary information, because the growth itself may be benign and its pedicle malignant or vice versa. Again, serial sections alone can determine malignancy in some cases. The infiltrating form of carcinoma resembles an ordinary cystitis in some cases, but in general the cystoscopic picture is so typical that a diagnosis can be made quite readily.

One must never fail to examine the posterior urethra primarily or before pronouncing a case as cured since recurrent growths in this portion of the lower urinary tract are not uncommon and

frequently overlooked. This examination can be very easily carried out by using the newer types of posterior irrigating urethrosopes.

Another important feature of vesical neoplasms is that they may be secondary to a pri-

Let us consider which of the various forms of tumors can be placed in these three divisions.

1. Those in which there is a prospect of success.

In this group we are able to place, thanks to the use of fulguration (high frequency current) with or without the addition of radium emanation implants, the benign papilloma (A of Fig. 2) whether pedunculated or sessile. The small ones even if multiple and favorably situated can be fulgurated through an operating cystoscope *i. e.*, without operation. About 35 per cent will recur after such endovesical treatment but even these can usually be cured with repetition of the fulguration or the implantation of radium emanation seeds.¹ This is the ideal and most commonly employed method of treat-

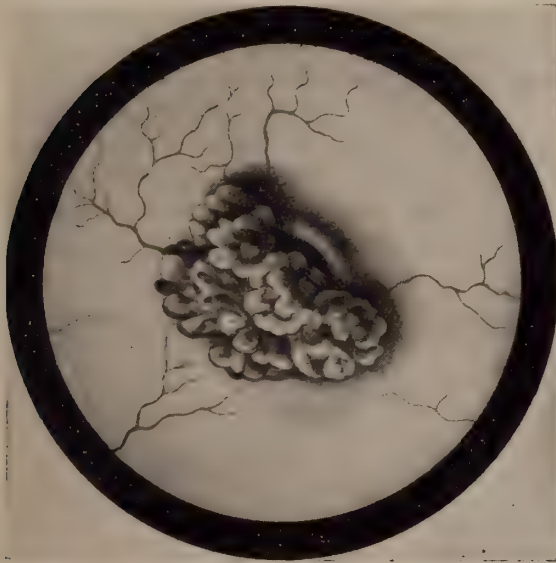


Fig. 3. Papilloma of renal pelvis has been followed by implantation metastases of the ureter and one of latter protrudes through uretral orifice.

mary growth in the renal pelvis or ureter so that occasionally one can see a papilloma protruding through the ureteral orifice (Fig. 3) which of course gives a clue as to the renal or ureteral origin of a secondary implantation growth in the bladder itself. It must not be forgotten, however, that, as in a recent case of ours, a primary vesical neoplasm (carcinoma) may arise from the edges or lips of a ureteral orifice and simulate a metastases by implantation of a renal or ureteral tumor.

TREATMENT

This is at the present time the least satisfactory portion of the subject because in the majority of cases we as urologists are not asked to examine the patient until the growth has undergone malignant changes and is so extensive as to make the results of any kind of treatment doubtful. For clinical purposes of therapy we can divide the cases as follows:

1. Those in which there is a prospect of cure.
2. Those in which it is questionable.
3. Those in which it is hopeless and our therapy only palliative.

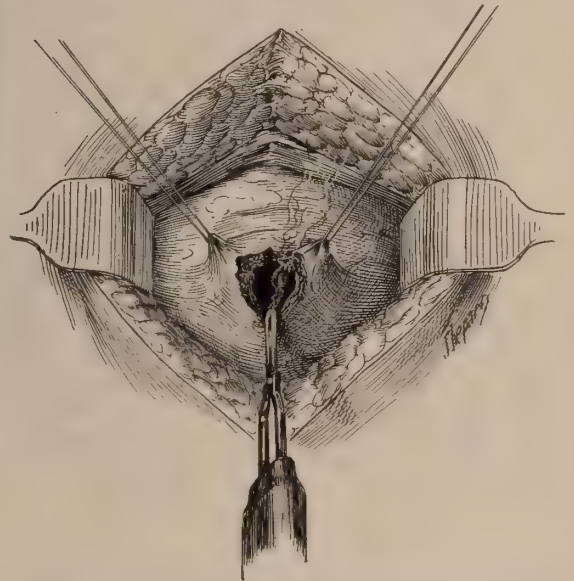


Fig. 4. Bladder being opened with electric cautery in order to prevent implantation on edges of bladder incision.

ment of the small papillomata provided that they are not located at the dome or vertex of the bladder. In the latter as well as in the case of the medium or large single or the multiple benign papillomata the method of choice, we have found to be the use of surgical diathermy² (Figs. 3 and 4) through a suprapubic cystotomy incision. One is no longer justified in attempting to use a wire loop or snare either endo or trans vesi-

1. The gas given off by radium is extracted and sealed in fine capillary glass "seeds" or tubes which in turn are placed in gold or platinum filters so as to screen off the caustic Beta rays of radium.

2. This is a recent development of the D'Arsonval bipolar high frequency current so that machines are now constructed which deliver a current of such high amperage and relatively low voltage as to generate any desired degree of heat in the tissues.

cally to remove a papilloma and above all not to attempt to divide a pedicle with an ordinary scalpel through a suprapubic incision. Neither of these give protection against the recurrence of the papilloma or inhibit any incipient cancerous changes in the pedicle.

Diathermy (surgical) does not burn the surface like the ordinary cautery but generates heat within the tissues so that the cancer cells themselves are destroyed but not the surrounding normal tissue.

We feel that diathermy gives promise of far more permanent cures in both benign and malig-

fulguration, radium or other forms of treatment.

The second point which I would like to impress upon you is that a patient who has been treated for bladder tumor must be cystoscoped at frequent intervals. It is our practice to do this once a month as a routine procedure.

2. Cases in which treatment is doubtful.

This group includes cases of recurrent papilloma in which fulguration or radium treatment is of no avail and those of papillomata which appear to be malignant from the onset. We are still groping in the dark in this group of cases. In one clinic, radium alone is used, in another,

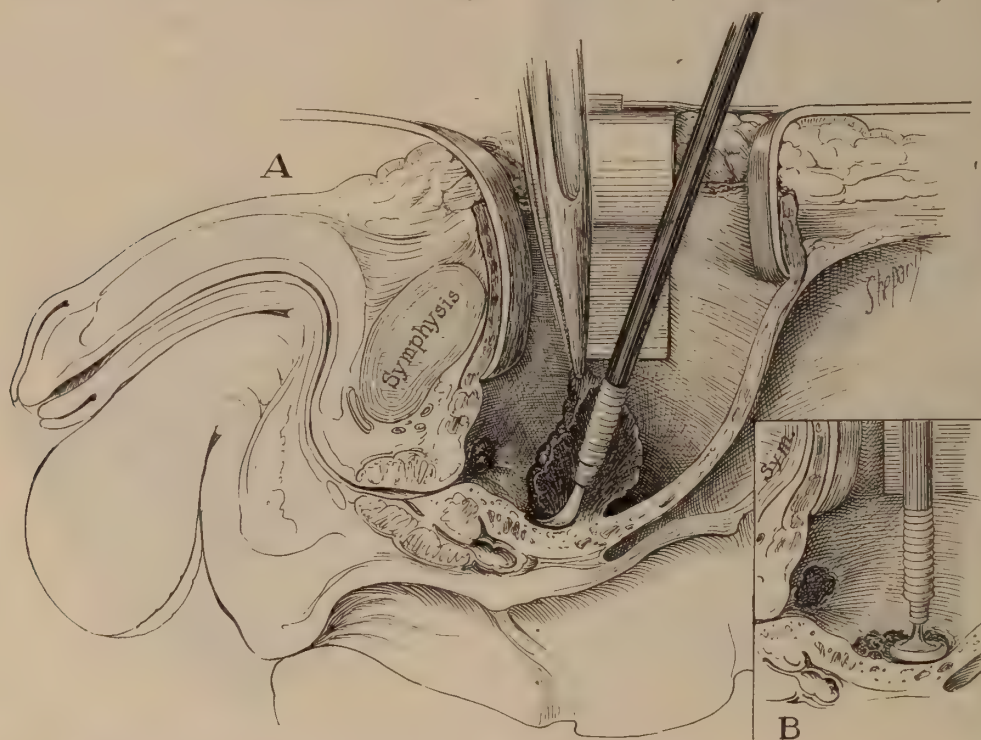


Fig. 5. A. Division by diathermy of base of a large pedunculated papilloma. B. Application of diathermy "button" electrode to base of growth.

nant papillomata than do either radium or resection.

There are two points which I would like to emphasize in connection with apparently benign papillomata. One is that every such growth is potentially malignant hence every case of hematuria calls for an immediate examination as to its source. If it is due to a papilloma we can offer the patient a great deal if the diagnosis can be made at a time when the tumor is still small and the chances of malignant changes slight. We have almost reached the conclusion that the only way one can tell whether a papilloma is benign or malignant is if it tends to recur in spite of

resection of the tumor bearing area of the bladder, while in a third, these two methods are either applied together or are used in conjunction with deep therapy, diathermy. It is true that we should not blindly employ a single method but give the patient the benefit of all of them, combined, if necessary, to cure. We must bear in mind, however, that the systemic damage from the use of too large doses of radium or of x-ray is a factor which must not be overlooked. Statistics from clinics where a large number of cases are treated by one or a combination of the above mentioned methods are not very encouraging. We have found that surgical diathermy applied

through a suprapubic incision has thus far given us the most satisfactory results in medium and large benign as well as in malignant papilloma cases. We are not yet ready to report our results because we feel that as in carcinoma of the breast, one cannot speak of a cure until five years at least have elapsed since the treatment was begun. We hope to be able to publish a series of such favorable end results later.

3. Cases in which palliative measures alone are applicable.

Death from bladder cancer seldom occurs as it does in other localizations of cancer, from extension to adjacent viscera or from the effects of metastases. The majority of bladder tumor patients die from uremia or urosepsis due to blocking of the ureters. It is true that papillary cancer extends through the bladder wall but it does this at a much later period of its evolution than the infiltrating variety of cancer.

The therapeutic means which can give relief to these incurable cases are the following:

- (a) Deep Roentgen therapy.
- (b) Insertion of radium (endo or transvesical).
- (c) Ureterostomy or nephrostomy.
- (d) Reimplantation of the ureters into the rectum.

I cannot discuss these in detail. Suffice it to say that they are all of use in individual cases but in our clinic only deep therapy or ureterostomy are employed to any extent.

DISCUSSION

Dr. E. H. Weld, Rockford: This was a very beautiful demonstration of bladder tumors. I want to compliment Dr. Eisendrath on this wonderful paper. One point that I want to emphasize. Dr. Eisendrath mentioned it as one essential of early diagnosis, and that is blood in the urine—hematuria and a painless hematuria. These people do not complain of painful urination, but come in apparently good health complaining that they noticed blood in the urine on one or two occasions or for a day or two and then the blood disappeared from the urine. A case that has had blood in the urine at any time is a case that should be thoroughly investigated to determine where the blood is coming from. I think we have been able to show in a series of urine examinations that the microscopic examination of the urine is far more important if you are looking for pathology than the chemical examination. In these cases if you will examine them routinely even though they have no microscopic evidence of blood, you will find some blood cells that will lead you to make the diagnosis.

Dr. C. W. Hanford, Chicago: Dr. Eisendrath made

a very evident plea in his most excellent paper for the necessity of a suprapubic opening in the treatment of bladder tumors. A few years ago Dr. Hugh Young devised a mechanical arm for holding an applicator that would extend through the urethra and he endeavored to hold the radium a long time in that way. It was very soon demonstrated that the slightest variation on the part of the patient's body would cause a wide throw out of the rays of radium, causing them to go to the surface where they were not needed. I would be very sorry to be obliged to surrender the positive palliative effect of radium in the treatment of neoplasms and a possible cure in many cases for the colloidal gold, judging from my experience with two cases of cancer of the uterus. In those cases there was absolutely no cessation of pain and no sensation on the part of the patients that they were taking anything more than some clear water.

There is one thing I want to suggest, a word of warning regarding the use of radium in bladder tumors after fulguration and surgical diathermy. You are naturally going to have some sloughing after your surgical diathermy and therefore you must be very cautious concerning your dose of radium that you are going to apply afterwards; otherwise, you are going to have an area of necrosis that may be difficult to handle.

Dr. Henry Schmitz, Chicago: Dr. Eisendrath's demonstration was very good. I wish to dwell on this one point: In the first place, by cystoscopic examination you can see the kind and size of the growth and the infiltration of the surrounding tissues. For instance, if you see a tumor, whether it be a papilloma or a sessile growth, that does not cause any surrounding infiltration then you know you are probably dealing with an early carcinoma of the bladder. Furthermore, you cannot distend that bladder to the normal tolerance. Second, there may be a normal capacity of the bladder, but usually the tolerance is lessened, so much so that the patient cannot hold an ordinary amount of boric acid. In the next case you will find that the greater amount of bladder cancer is infiltrated. In advanced cases we find involvement of the entire bladder mucosa. We should not forget a rectal examination, particularly if the tumor is near the posterior bladder wall and fortunately most cases are so located. Cases that have infiltrated the entire bladder wall are entirely hopeless.

We have made a very peculiar observation in so-called clearly inoperable cases. In a report of 58 cases of cancer of the bladder, divided into one-third treated with radium, one-third operation with x-ray, and one-third, by x-ray only, we found there were seven cases of carcinoma of the bladder treated with radium only, primary cancers that had never been touched by surgery or diathermy and had been present eight months when we observed them. These gave the poorest results. The average duration of life was only four months, while in the recurrent cases the average duration of life was only five months. About three and one-half years ago a man came to us who had

been treated three times prior to admission to our hospital by one of the most excellent men in Chicago. He was treated by diathermy followed by radium. The first time he remained practically free from symptoms for a year and a half, the second time for a year and the third time he passed blood almost continuously. When we saw him he had a general involvement of the entire mucosa with an enormous carcinoma. We treated him with x-ray. He is living today. His bladder cleared up entirely. The observation we made in his case we have made in twelve others that are alive after three years.

Dr. D. Kobak, Chicago: We all recognize Dr. Eisendrath as being one of our eminent men among the students of bladder surgery. I had the pleasure of watching Dr. Eisendrath perform some of his operative work at the Cook County Hospital and to assist him in several bladder cases by surgical diathermy. I want to compliment him on his very fine technic.

Surgical diathermy has come to be recognized within recent years as a potent adjunct to orthodox surgery. The electrical energy introduced within the region of the neoplasm is always under the most flexible control of the operator, and the heat created within the neoplasm coagulates or desiccates the growth to any depth desired. Since normal cells can bear the burden of a greater degree of heat than malignant cells, the thermal energy introduced by surgical diathermy acts as a selective agent upon malignant structure without devitalizing adjacent normal cells. One more important point is worthy of re-emphasizing: Surgical diathermy reduces the possibility of primary or secondary hemorrhage to a minimum because the blood vessels are thrombosed beyond the area of destruction. Hence the risk of the spread of metastatic elements through either the blood or lymph channels is reduced to a minimum. I was glad to hear Dr. Eisendrath stress these important points.

In conclusion I should like to ask the doctor whether he does not find it much better to use the transurethral method in small papillomas than the suprapubic route?

Dr. Daniel N. Eisendrath, Chicago (closing the discussion): I attempted to make that clear that the small papillomas were all treated through the operating cystoscope and diathermy. In all the others I am coming more and more to treat them through the suprapubic incision.

I want to emphasize one point brought out by Dr. Hanford that you must be very careful about the use of radium around diathermized areas. I am not using it as much today as when it first came out. There are cases that are very discouraging and in those we have been implanting the radium in such distances and in such sizes that we do not get sloughing. There are three rays in radium, alpha, beta and gamma. The beta cause a great deal of slough, the alpha does not amount to much, the one that really does our therapeutic work is the gamma. We use glass covered tubes to exclude the beta rays from the other. We give our radium in glass tubes covered by platinum,

which screens off the beta rays and gives us only gamma rays. These radium capsules or seeds are made two and one-half millimeters each and we put them one centimeter apart throughout the tumor. They are placed in such a way as not to overlap and so not cause sloughing. Radium undoubtedly has a place in the treatment of tumors of the bladder, but I think we are coming to use diathermy more than ever before.

PROBLEMS OF COMPARATIVE PATHOLOGY OF INTEREST TO PHYSICIANS IN ILLINOIS

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In this brief discussion I have been guided by the thought that some of the problems with which the animal pathologist is concerned are of interest to the practicing physician. The danger to man of anthrax, glanders, rabies, tuberculosis and other bacterial and parasitic infections of animals has been repeatedly confirmed by the clinician and is regarded as common knowledge in this and other countries. Throughout the Middle Western states we frequently encounter these and other diseases of animals which are communicable to man, or concerning which the evidence is such as to arouse suspicion. These observations from a public health standpoint serve to remind us that as long as man engages in husbandry and is dependent upon animal food and food products from animals, the diseases communicable from beast to man may continue to engage our attention. It is therefore essential in the maintenance of public health of this and future generations that an adequate, healthy and wholesome supply of animal food be made available, and that our knowledge of the epizootology of animal diseases be maintained on a high standard. Since there are no more important foods than milk and other dairy products we should be ever mindful of the heavy responsibility of keeping our dairy herds free from disease. Scarcely a season passes without the occurrence of milk sickness in man as the result of drinking milk from cows suffering from Eupatorium or White Snakeroot poisoning, a disease that has occurred since the pioneer days in the Middle West.

The danger of bovine tuberculosis to children

*Read before the Section on Medicine, Illinois State Medical Society, Champaign, May 18, 1926.

has been recognized by the medical profession for many years, while recently the occurrence of this disease in children in Edgar county, in Illinois, as well as the occurrence of trichinosis in man in other localities on two occasions, has served to emphasize the importance of rigid control methods. Our present knowledge regarding the relation of diseases of animals communicable to man has been largely responsible for federal and municipal meat and milk inspection regulations. Measures which guard against the transmission of diseases from animal to man are important considerations in the public welfare of every citizen of the state. The protection of the public against infections traceable to animal food is the responsibility of our National and State Livestock Sanitary officials and State Boards of Health, but locally a common responsibility of the physician and veterinarian.

In any discourse on the subject regarding the problems of animal pathology and public health it is well to recall first that the study of diseases of animals has and will probably continue to contribute knowledge of value to the physician. The investigational results regarding the cause and treatment of animal ills have also had an important influence in formulating successful studies of comparable problems in human medicine. Let us recall that Theobald Smith in demonstrating the carrier feature of the tick in the spread of Texas fever in cattle paved the way for the solution of certain insect-borne infections of man. Hall's investigations in the treatment of hookworm in dogs have revolutionized the treatment of this disease in humans, while the researches of Ransom on the life cycle of the roundworm in pigs are recognized as one of the most brilliant chapters in the history of parasitological research. The results of his investigations have enabled physicians to anticipate and understand the migration of *ascaris lumbricoides* in the human host, and to interpret correctly in infested children the hepatic and pneumatic disturbances first recognized in pigs. Further advances in human medicine may yet be traceable to Ransom's investigations regarding the life cycle of *ascaris lumbricoides* in swine. Such notable contributions merely serve to emphasize the importance and advantages of the investigational field in animal pathology and its far reaching influence in the solution of problems primarily related to human medicine.

Rabies.—The appearance of rabies in 17 or more counties in Illinois during the first three months of 1926 is a matter of public concern and of special interest to the physician. In the control of this disease your attention is invited to the original investigations on immunizing dogs against rabies in Japan. The efficacy of the prophylactic inoculation of dogs against rabies as developed in that country has been confirmed by Eichhorn, Lyon, Reichel and other animal pathologists in the United States and leads to the belief that this disease in dogs may eventually be suppressed. The prophylactic inoculation of all dogs obviously provides an important degree of protection against the development of rabies in man by eliminating the chief source of infection. Since the canine population of the United States is estimated at eight million, it is apparent that a formidable problem is presented in the vaccination of all dogs. It is hopefully expected, however, that immunization of these animals in infected localities may ultimately reduce the occurrence of this disease in man and humanely protect the dog. An unexposed healthy dog may be securely protected against rabies for a period of one year by vaccination. The evidence suggests that a vaccinated dog during this period is largely eliminated as a factor in contracting or spreading the disease. In controlling canine rabies in many towns the adoption of local ordinances requiring all dogs to be muzzled has been beneficial. This year the city council of Urbana upon the recommendation of Doctor Burres prepared an ordinance requiring the vaccination or muzzling of all dogs, which it is hoped will materially contribute to the suppression of rabies in this vicinity. In combating rabies last year in Detroit, Michigan, twelve thousand of the thirty-two thousand licensed dogs were vaccinated against rabies. Of the untreated dogs 177 or 11.4 per cent, developed rabies during the year, while only six of the twelve thousand vaccinated dogs developed the infection. Of this number one had been bitten by a rabid animal 3 weeks prior to vaccination. Dr. Vaughan, Commissioner of Health of Detroit, states: "It is believed that the control of this disease has been effected by a combination of measures including vaccination of dogs and the elimination of stray and ownerless dogs, and last but not least, through the co-operation of the public in

restraining dogs to the owner's premises. Sane newspaper publicity has done much to obtain public co-operation."

The annual immunization of dogs against rabies is commended to your best judgment in localities where the disease is endemic. Muzzling and quarantine are tentative measures that can be encouraged and recommended, but so far as we are able to observe they do not offset or diminish the importance of vaccination in the control of this disease.

Botulism.—Botulism in man is relatively rare, but its fatal character marks it as a serious affliction. In connection with investigations of food poisoning in animals, evidence has been accumulated to prove the existence of a type of food poisoning in animals caused by *Clostridium botulinum* A, B and C. A and B types of this intoxication, first recognized in Europe, have been encountered by physicians in Indiana, Ohio, Michigan and other states. Improperly sterilized, spoiled or tainted canned meat and vegetables have been responsible for the majority of cases encountered in man. The prevention of the disease in man is dependent upon avoiding unwholesome food. The treatment is symptomatic while specific antitoxins have been found helpful. It is significant to note that antitoxins prepared from strains isolated from animal sources have been successfully used in allaying the toxemia in man induced by contaminated food products.

Streptococci and Bacterium Abortum (Bang)
Infections.—Aside from the danger of bovine tuberculosis, possibilities of other milk-born infections are worthy of consideration. Septic sore throat due to streptococci infection in milk has been recognized, while Davis has pointed out the carrier feature of the cow's udder in spreading the infections to man. More recently the presence of *Bacterium abortum* (Bang) in the udder of lactating cows has been suggested as a possible danger to man. The attention of the medical profession has lately been called to the occurrence of Malta fever in man as the result of drinking of goat's milk. The studies of Evans showing the close relation of *Bacterium abortum* (Bang) and *Micrococcus melitensis*, the cause of Malta fever in goats, have been followed by some rather significant clinical observations which raise the question regarding the patho-

genesis of *Bacterium abortum* (Bang) to man. Huddleson has presented evidence which suggests that man may contract a laboratory infection through handling cultures, while Moore and Carpenter have encountered cases of the disease in man traceable to drinking cow's milk. The possible relation of milk is not eliminated in cases reported by Huddleson, while Keefer and others have reported cases of undulant fever from unrecognized causes.

The symptom complex of *Bacterium abortum* (Bang) infection in man has been described in medical literature for many years under the caption of undulant fever and it is possible that one type of this disease, in view of our present knowledge, may be traceable to this micro-organism in milk. At this time it appears that physicians have an important responsibility in checking up the circumstantial evidence presented by different investigators regarding the relation of undulant fever to the drinking of milk containing *Bacterium abortum* (Bang). Meyer has shown that the lesions induced in monkeys from *Bacterium abortum* (Bang) are largely dependent upon the number and virulence of the organisms in the milk. Ordinarily the amount of infection in market milk is relatively small, yet the number and virulence of the organisms may vary. In view of the preliminary findings it has been suggested that in certain obscure febrile conditions of man wherein the cause remains unestablished, direct blood cultures and agglutination tests be resorted to by physicians in checking up the possible relation as well as the possible prevalence of *Bacterium abortum* (Bang) infection in man. Huddleson describes a laboratory or milk-born infection in two students as follows:

A former graduate student became ill during the winter of 1924 while working in the laboratory with several newly isolated cultures of *Bacterium abortus*. He had never worked with cultures of *M. melitensis*. He suffered from periodic attacks of headache, muscular pains, slight fever, malaise and gastric disturbances during the winter and spring and became greatly emaciated toward the beginning of the summer. He left the laboratory in June and became associated with the Detroit Medical College. The condition persisted throughout 1924 and through July, 1925. The paroxysms, however, were less severe. He was examined by several competent physicians during this time, but they were unable to arrive at the cause of his condition. In the summer of 1925 he happened to be reading some case reports on undulant fever. The symptoms described compared so closely with his own that

he made an agglutination test of his blood, using *Bacterium abortus* as antigen and found that it reacted in a dilution of 1:400. No blood or urine cultures were made at the time. Cultures of the blood and urine were taken in October, 1925, with negative results. At this time the agglutination test was positive in a dilution of 1:50 to both *Bacterium abortus* and *M. melitensis*. His condition was much improved in August, 1925, and continues so at this time.

Oct. 24, 1925, another case came to our attention. This young man was also a graduate student in our laboratory and had been working for more than a year with cultures of organisms isolated from the pregnant bovine uterus. Among these were three or four cultures of *Bacterium abortus*. He was away from the laboratory during three months of the summer of 1925, returning in September. October 24, he became suddenly ill, with muscular pains, pains in the back of the neck and the sacroiliac region, malaise, headache, fever, chills, high pulse, a slight cough and hoarseness. During the next four days the temperature was normal in the morning and gradually rose during the afternoon. On the 29th he felt normal; on the 31st a second paroxysm occurred, the temperature at this time rising to 104 F. His condition was again normal, November 5, except for marked prostration. The degree of prostration is gradually increasing and the process of alternating recrudescence and defervescence is continuing. From the beginning he has had a painful spleen, gastric disturbances, weak eyesight, and alternating constipation and diarrhea.

A physical examination by Dr. O. H. Bruegel of East Lansing, Jan. 5, 1926, seven days after a paroxysm showed moist and clear skin except for a few small reddish spots scattered over the chest and abdomen, some of which were slightly scaly, unlike rose spots. The tongue was heavily coated and whitish. The tonsils had been removed. The glands of the neck were not palpable. The thyroid was normal. There was good expansion in both lungs, which were normal, except for an occasional râle. The apex beat of the heart could be neither seen nor felt. The heart was possibly slightly enlarged to the right; the sounds were not clear and seemed slightly muffled. There was a second pulmonic impulse, but it was not doubled. The pulse was 80, with low tension. The systolic blood pressure was 104; diastolic, 70. The abdomen was not distended; there was some tenderness below the costal margin on both sides and in the regions of the gall-bladder and spleen. The liver could not be felt. The spleen was easily palpable, extending one finger-breadth below the costal margin on inspiration. The right lower quadrant was normal.

The first blood and urine culture made Nov. 11, 1925, was negative. The blood serum at this time agglutinated both *Bacterium abortus* and *M. melitensis* in a dilution of 1:1,000. A blood culture November 23 showed an organism indistinguishable from *Bacterium abortus*. The urine culture was negative. A blood culture December 8 was also positive. The agglutination titer of the blood serum at this time had risen to

1:2,000. The same titer persists at the present writing.

The source from which the infection was acquired in this case has been a matter of no little speculation. It is obvious that three sources may be considered; namely, the handling of laboratory cultures, and the ingestion of raw cow's milk or goat's milk in which the infective organism was present.

Since this man had worked with cultures of *Bacterium abortus* in the laboratory, the probability of accidental infection cannot be altogether excluded.

The question of infection from goat's milk may be excluded, as there is none sold in this community.

In considering the question of cow's milk it was found that this man had been drinking raw milk obtained from a small dairy. A sample of milk was obtained from a bottle on the milk wagon of the owner and examined culturally for *Bacterium abortus* by a previously described method¹. A large number of colonies of *Bacterium abortus* were obtained on each of the several plates made. The presence of *Bacterium abortus* in the milk indicates that the infection may have been acquired from this source, as well as from handling cultures of the organism in the laboratory.

When the symptoms of the case above described became known to the men working in our laboratory, another graduate student, who had been working with *Bacterium abortus* and *M. melitensis* for more than one year, remarked that he had had similar symptoms, only somewhat milder, two weeks previously. At this time he complained of an occasional pain in the region of his spleen and his pulse was 90. A blood culture and an agglutination test were made Nov. 23, 1925. An organism was obtained from the culture which resembled *Bacterium abortus* and *M. melitensis* in a dilution of 1:200. December 8 the titer of the serum had risen to 1:400. His condition still appears good, except the painful spleen and a feeling of slight prostration. According to previous clinical studies, the case would be classified as the ambulatory type of the disease.

An inquiry was made as to the source of the milk he had been drinking, and it was found that it came from the same source as that consumed by the patient with the previously described, typical form of the disease.

Ascaris Lumbricoides.—This parasite is commonly present in pigs throughout Illinois and is regarded by some as identical with the roundworms found in humans. Thus far parasitologists have not demonstrated anatomical or physiological differences between the human and porcine ascarid species, though the final proof of their identity is lacking. It may be important to mention that the widespread character of the parasite in pigs provides an opportunity for infestation of humans. Ascariasis occurs most often in childhood. From time to time cases have been reported in literature in which an

amazing number of adult ascarides have been passed in the stools or vomited by patients and when it is recalled that an adult worm measures from 10 to 14 inches in length, the possibility of the serious consequences resulting from the migration of such a parasite requires no emphasis. A summary of the literature removes any doubt of the necessity of measures to prevent the spread of this infestation which in addition to being serious is repulsive. The pathologic manifestation of ascariasis is variable. This is due partly to the fact that the larval forms have an extensive course of migration in the body of the host and partly to the fact that the adult forms may also have wandering habits. McLean of Jackson, Mississippi, reports a case of an 18 months old child requiring surgical intervention in which 120 worms had obstructed the intestines for a distance of 8 inches. A similar case, with beginning gangrene, in a 36 year old patient is mentioned by Baugh at Albany, Alabama. Aside from intestinal obstruction other cases of ascariasis have been mentioned in connection with appendicitis and pseudo-appendicitis. Toxic injury terminating in coma has also been mentioned in connection with ascaris lumbricoides infestations of man. Excluding the pathologic phenomena of obstruction including appendicitis or toxemia credited to this parasite the presence of ascarides in the intestines is a source of danger because of their wandering habits. They may enter the common bile duct and from it enter the gall bladder or the hepatic duct and liver. Aside from mechanical obstruction, avenues of infections are open by directly carrying micro-organisms or indirectly by decreasing the tissue resistance. Occasionally ascarides may pierce the intestinal wall and set up peritonitis. It was long ago laid down as a principle of surgery in the tropics that patients should be free of ascarides before operations were undertaken on the stomach and intestines in order that these worms might not open the operative wound. The large prevalence of ascarides in a community is obviously a mark of filth indicating that the host has swallowed the alvine discharges of an infected patient.

The question in connection with ascaris lumbricoides is how abundant is it in man and especially in children in the country where it is so widely prevalent in pigs. If present it may be the cause of a variety of human complaints of

a type now designated as indefinite since the symptom complex may be accompanied by disturbances not correctly diagnosed. Physicians have a splendid opportunity to advance our knowledge of the relation of this parasite in man to pigs by collecting specimens of ascaris lumbricoides for study. These specimens may be submitted to parasitologists who are studying the host relationships of this parasite in man and animal. Raffensperger has accumulated important data on this subject and at this time is conducting experiments on passing the human ascarid species through the pig, the results of which will be of interest to physicians.

Tuberculosis.—Though Koch originally contended that bovine tuberculosis was not communicated to man, the results of investigations in England and the United States, too voluminous to mention in this discussion, present a preponderance of evidence to the contrary. Reliable information regarding the danger of bovine tuberculosis to human beings has been an important factor in the great federal and state campaign during the last ten years against this disease in cattle. The accomplishments to date are looked upon with great favor by public health authorities as well as representatives of the cattle industry. The control of this disease in cattle bids fair to be recognized as one of the great accomplishments of American civilization in the field of preventive medicine. In combating bovine tuberculosis there is probably no country in the world that in such a brief space of time, a period of less than 10 years, has accomplished more than the United States. Thousands of cattle are being tested each month in Illinois and as many as two thousand reactors to the tuberculin test have been received at the Chicago market in a single day. Train loads of tuberculous cattle are thus going to the shambles in protecting the cattle industry and safeguarding public health. This work is an important part of the campaign for pure milk from healthy cows and it is hoped that it may be extended to every locality in the state. With the exception of badly infected localities the occurrence of the disease has been reduced in an encouraging fashion which justifies most hopeful confidence in the reliability of the tuberculin test and the integrity of our county inspectors.

As the program progresses it seems important that the danger of fowl tuberculosis should not

be overlooked. During the last five years a study of this disease at the Illinois Experiment Station suggests that 40 to 80 per cent of the lymph gland tuberculosis encountered in swine at the Chicago and East St. Louis markets is traceable to the avian infections, when heretofore it was believed that the bovine infection was exclusively responsible for tuberculosis in swine. See Table 1.

TABLE 1
CHICKENS AND GUINEA PIGS INOCULATED
WITH TUBERCULOUS LYMPH
GLANDS OF SWINE

Glands examined	85
Glands negative	23 27.0 per cent
Glands typed	62
Avian type	51 82.2 per cent
Aberrant A & M types	7 11.2 per cent
Mammalian type	4 6.4 per cent

In connection with these investigations we have had the opportunity of examining 6 tuberculous lymph nodes from children. According to our present standards of typing the virus of this disease, one specimen in addition to the human infection contained an aberrant type which produced anatomic lesions of tuberculosis quite indistinguishable from the avian type through four successive inoculations of fowls. See Table 2.

TABLE 2
CHICKENS AND GUINEA PIGS INOCULATED
WITH TUBERCULOUS LYMPH
GLANDS OF CHILDREN

Glands examined	6
Glands negative	2 33.3 per cent
Glands typed	4
Mammalian type	3 75 per cent
Aberrant M type	1 25% slightly infective to chickens

It is important that more tuberculous glands from children be studied and physicians may play an important role in this work. The frequency of avian tuberculosis in the lymph glands of children is a matter of investigation that should receive attention as the opportunity presents. Material of this character from physicians in Illinois will be examined at the University Laboratory of Animal Pathology and Hygiene to accumulate data on this subject.

Through the cooperation of Dr. Bundesen, Chicago Commissioner of Health, Dr. Hull, Director of the State Laboratories at Springfield, and Dr. Martinie of Urbana, we have had an opportunity to examine 115 tuberculous sputa from cases of pulmonary tuberculosis. Of this number 89 upon animal inoculation gave evidence of the human type and 17 or 16 per cent were human strains with an aberrant type for fowls. See Table 3.

TABLE 3
CHICKENS AND GUINEA PIGS INOCULATED
WITH TUBERCULOUS HUMAN SPUTA

Sputa examined	115
Sputa negative	9 7.82 per cent
Sputa typed	106
Mammalian Type	89 83.9 per cent
Aberrant type	17 16.0% slightly infective to chickens

The occasional somatic or irregular infective character of *Mycobacterium tuberculosis* prompts the suggestion that from the standpoint of control more emphasis should be placed on tuberculosis as a problem rather than building entirely on the three known types with reference to host susceptibility, for the reason that a small, though possibly important, per cent of the three types of *Mycobacterium tuberculosis* may prove infective irrespective of the host invaded.

A study of the virus in 28 bovine lymph glands, with special reference to its ability to produce anatomic lesions in an unnatural host, suggests as in other types that the three types of *Mycobacterium tuberculosis* thrive best in a homologous host, but that certain aberrant strains are not so definitely limited. Three of 16 tuberculous bovine lymph glands proved capable of producing gross lesions in fowls. See Table 4.

TABLE 4
CHICKENS AND GUINEA PIGS INOCULATED
WITH TUBERCULOUS LYMPH
GLANDS OF CATTLE

Glands examined	28
Glands negative	12 42.8 per cent
Glands typed	16
My type (Bovine)	13 81.2 per cent
Aberrant M type	3 18.7% slightly infective to chickens

The part played by the aberrant strains is an important consideration which will require time to appraise and may become more apparent as the incidence of tuberculosis in both animal and man is reduced. The source of tuberculous infection will necessarily be more closely scrutinized and the possibility of the avian type in man is worthy of careful attention.

DISCUSSION

Dr. E. W. Crum, Waverly: I would like to ask the Professor about parasites in well water. He did not touch on that.

We had in our own well a small worm about one-eighth of an inch long with numerous feet and about the size of a thread.

And then there was another small parasite-like butterfly. It could be seen without the microscope. I would like to know what I could put in the well to eradicate them.

Dr. Graham: I cannot answer the question because I am not familiar with the parasite referred to.

EMERGENCY LUNG SURGERY*

DONALD MACRAE, JR., M.D., F.A.C.S.

COUNCIL BLUFFS, IOWA

Prior to 1917, when the United States entered the World War, interest in chest surgery in this country had been seriously neglected. A few bolder men attempted to arouse the profession to the importance and possibilities of this branch of surgery but without marked success except in isolated instances. The World War opened the eyes of those whose opportunities afforded advantages not enjoyed by the great majority of physicians and surgeons in civil, yes, and in military life, as well. In spite of the lessons learned in France, the writer is forced to the conclusion that the advantage gained by the few in the treatment of chest injuries has not yet been generally recognized by the profession in this country. Greater interest by those fascinated by the wonders being revealed in this almost unexplored and neglected territory has taken place in recent years, through the efforts of a few doggedly persistent European surgeons, of whom Sauerbruch of Munich, Germany, is perhaps the leader.

Part 1. Willy Meyer, Lilienthal, Matas, and a few others in this country, assisted by a corporal's guard of interested co-workers, who, having fought for years to attract the attention of the profession to the possibilities of chest surgery, can now justify their position and their efforts by pointing to the greater army of younger enthusiasts now pushing the great wheel of progressive surgery in the United States toward the goal of supremacy.

"The American Association for Thoracic Surgery," an organization born of the war, is doing much to co-ordinate and mobilize discussions and investigations in all problems pertaining to chest disease.

Lilienthal says: (Arch. Surg. Jan., 1924): "It will not be many years before thoracic surgery, recognized as a true specialty, will occupy a position akin to abdominal surgery, both in the indications for operation and in the varieties of recognized technic."

Part 2. It should be of great interest to all of us and to our patients, particularly, to know that the early diagnostic recognition of carcinoma of the lung¹; carcinoma of the esophagus;²

bronchiectasis,³ etc., offers fair chances for life, provided prompt surgical interference is permitted. In order that early diagnosis may be assured it is necessary to know that when obstruction of the esophagus is established the mortality is 100 per cent. The same may be said of lung carcinoma when the ordinary methods of diagnosis are used.

The profession should use greater efforts in the attempt to differentiate the different forms of chest pathology. The bronchoscope and the esophagoscope, instruments, so often ignored, are equally necessary, if not of greater importance than the x-ray in the early detection of many chest conditions. Failure to recognize disease early is, after all, the greatest obstacle in the pathway of any successful surgery.

Part 3. Surgical treatment of pulmonary tuberculosis is now on the screen, have you seen it? I can do no better than quote from Alexander (Surgery of Pulmonary Tuberculosis):

Only a few years ago any kind of surgery of this disease (tuberculosis) was considered ill advised and meddlesome. Extra pleural paravertebral thoracoplasty and allied procedures are now offering to a large group of persons with predominantly unilateral tuberculosis, an excellent chance to escape a certain tuberculosis death and to become permanently well. Furthermore, it is offering them an opportunity to earn their living, and to return to their families and communities without fear of spreading infection.

At the present time only relatively few cases of far advanced tuberculosis are receiving the benefits of surgery. The majority of these cases have lung cavities, and have been treated without success for months or years with modern sanatorium methods, including artificial pneumothorax. Almost without exception every patient operated upon would have died of tuberculosis if operation had not been performed.

Thirty-seven per cent. of the surgically treated cases in all countries in recent years have actually been cured and another twenty-four per cent. decidedly improved. Five per cent. were unimproved or became worse. The immediate or direct operative mortality was approximately one and five-tenths per cent. and the additional mortality during the first six weeks from causes indirectly connected with operation, only twelve per cent. The remaining nineteen per cent. include the deaths that had no connection with operation; most of them were caused by progression of the tuberculous disease in the unoperated lung of other organs (Table IV, page 320).

Here we come into our own from a diagnostic as well as an operative standpoint, for every community has one or more surgeons, working in conjunction with trained medical men, compe-

*Read by invitation before the Section on Surgery, Illinois State Medical Society, Champaign, May 19, 1926.

1. Lilienthal: Arch. Surg. Jan., 1924.

2. Jackson-Torek: Arch. Surg. Jan., 1926

3. Hedblom: Arch. Surg. Vol. 8, Page 394.

tent to perform operations upon this class of unfortunate sufferers.

Artificial pneumothorax and extra-pleural throacoplasty with or without phrenectomy is open to the field of the good general surgeon and diagnostician working together.

All the cases described thus far, however, are of a chronic nature and permit of careful and painstaking study, and may be transported afar.

Part 4. I come now to the real subject of the paper.

INJURIES TO THE CHEST INVOLVING THE LUNG

These accidents often demand *immediate* attention, and it is to this class of lung and chest injuries the writer wishes to direct your attention. These cases cannot be transported great distances without serious consequences to the patient. In other words, the character of the wounds or injury are akin to similar accidents to the abdominal wall and the cavity within.

In this age of hold-ups, attempted murders and automobile accidents, severe lung and chest injuries are of frequent occurrence in every part of the country.

For this reason I have selected a subject of common interest to all physicians, rather than discuss some rare disease.

And yet many operable lung injuries are permitted to die from hemorrhage, etc., today, as they were one hundred years ago. What is the reason? My answer is this: *fear of opening the virgin pleura and producing fatal collapse of the lung.* The danger of an open pneumothorax was known to the ancients. Celsus, nearly 2,000 years ago, in discussing the question of studying anatomy by dissection of living criminals, related: "It is indeed true that the abdomen, with which our argument is less concerned, can be opened while a man yet lives, but as soon as the knife reaches the thorax and cuts the transverse septum, which is a membrane dividing the superior parts from the inferior (diaphragm) the man at once gives up the ghost, and thus it is the breast and its viscera of a dead, and not a living man, which the murderous physician examines. He has thus performed a cruel murder and has not learned what the viscera of a living man are like."

The writer has unconsciously followed in the shadow of the spirit of Celsus for lo! these many years. True, certain bold men have in the years

prior to the great war feebly advocated entering the chest under certain conditions of emergency, but the writer has had the hoo-doo about him, and has cowered behind the adage that "fools rush in where angels fear to tread." The lungs and their associated organs lived in the haunted house, and I was afraid.

Imagine my sensations, then, at Tours, France, when I was requested to "help out" at the French hospital in April, 1918. This request was made by Major L. Ombredanne, one of the foremost and most fearless surgeons of the French army. My first case was a French soldier, with a foreign body (shell fragment) in his right lung.

The operation was done under direction of Major La Dox Le Baird, the eminent French radiologist. The patient was on his belly, ether anesthesia with Ombredanne's mask. A mark about the middle of the scapula indicated the position of the foreign body. In spite of the fact that up to that time I had devoted eighteen years of my life to general surgery, this was a new one on me. I am sure La Dox Le Baird was aware of my weakness and mental anguish, for he soon described Ombredanne's method, which I blindly and hopelessly followed. All muscles were severed from the spinal border of the scapula and this bone was retracted outward; three inches of two ribs were excised sub-periosteally; at this point I was told to open the pleura and grasp the lung with forceps. Holding in my right hand a long metal instrument very much like a male catheter, I was directed to insert the point of the curve against the lung. La Dox Le Baird then with his fleuroscopic eyepiece told me to change the position and direction of the point of my catheter, then when the slant of my instrument satisfied him, I was told the distance below the point at which contact with the foreign body might be expected. A deep plunge with a pair of blunt forceps in the direction indicated by the catheter produced the contact desired. The forceps were then opened, foreign body grasped and removed. A purse string of catgut was then placed around the lung wound. Next the pleura was closed without drainage. The muscles along the spinal border of the scapula were sutured and the skin wound closed. The only drainage consisted of a rubber tube inserted under the scapula.

To my great surprise, the next morning I

found my patient not only alive, but apparently in excellent health, and smoking a cigarette.

It was my privilege to have operated or assisted in fourteen such cases, without a death.

I describe this first experience of my own somewhat in detail, in order that you may, to some extent, share with me the impressions and sensations of the fellow who must obey orders, in spite of the haunting ghost of Celsus.

Early in the war the British, French and even German surgeons were tardy in recognizing the possibilities of thoracotomy; they, too, were haunted by the shadows and teachings of past ages, and without positive or negative pressure cabinets, hesitated to perform. Necessity finally forced their hands to attempt radical measures, and then they, too, were surprised at the results obtained. It was my honored privilege to have commanded Mobile Hospital No. 1 working in the zone of advance, not far behind the lines, during America's participation in the great struggle. Only non-transportable wounded were admitted. It was during the Argonne drive that Maj. John L. Yates of Milwaukee with his able assistants reported for duty as a chest team.

Yates performed many operations on the most terribly wounded chests, with success almost unbelievable.

Time forbids an exhaustive study of the many chest injuries admitted to the receiving wards of Mobile Hospital No. 1. Nearly 7,000 non-transportable wounded American, French and German soldiers were operated on during the months from May to November 11, 1918.

However, in order to produce a picture more impressive and at the same time emphasize the importance and possibilities of emergency chest surgery, I wish to cite one case operated on by Yates:

Pusey McGee, an enlisted man of the 11th Balloon Section, admitted 3:00 P. M. at Fromerville stand. Wound received 8 A. M. of same day. This young man had received a machine gun bullet from the gun of a German aviator. The bullet entered the right neck, producing a compound fracture of the clavicle, passed into the chest, perforated the apex of the right lung, tearing a furrow through that organ, then through the diaphragm into the liver where the missile halted. The soldier was in shock; the sucking wound of entrance had been previously plugged at the dressing station. The entire right chest was full of blood, the lung apparently collapsed. Patient immediately transferred to the table of Dr. Yates. After a hurried preparation, the chest wall was opened, ribs retracted,

lung delivered through the incision, wound of entrance in the lung closed, the furrow sutured with a running lock stitch; the diaphragm was closed with catgut. The entire cavity was thoroughly wiped out and the pleura closed without drainage. A debridement of the clavicle with primary suture ended the operation. Transfusion of citrated blood followed in the shock ward.

This soldier is now an honored citizen of my own little city. His health is perfect, and I defy any x-ray artist to find evidence of any defect in the lung or chest wall. The bullet may, of course, be outlined in the substance of the liver where it probably will remain unmolested.

That one's viewpoint may be influenced by his relative position in the theater of war is evidenced by the varied opinions of the several surgeons along the lines of communication, beginning perhaps with the Dressing station, down to the Base hospital. For instance, Heuer, in his most excellent chapter on Surgery of the Thorax (War) (Keens, Surg. Vol. VIII, Cap. XLI) says: "The disadvantages of aspiration in the treatment of hemothorax are that it is incomplete, etc. . . . A number of surgeons have, therefore, advocated thoracotomy in the treatment of hemothorax. The procedure certainly has a very limited field of application. The general results of aspiration in the treatment of hemothorax are too satisfactory to warrant the much more formidable procedure."

If I remember correctly Heuer was stationed at Toul where the cases received were comparatively old. Many cases of lung injuries with marked hemothorax died long before they reached his permanent evacuation hospital. Even in our own position—a mobile hospital, picking up, following the troops here and there, found many dead in ambulances.

Had it been physically possible to have maintained a first class operating unit in the first line trenches, I am sure immediate fearless surgery might have saved many more lives.

In Heuer's chapter (page 359) he says: "Sauerbruch examined 300 dead on the battlefield and found 112, or 30 per cent., dead of wounds of the chest. From 20 to 25 per cent. of those who lived to reach first aid posts, died there from hemorrhage, shock and open thorax. An added 20 per cent. of those who were transferred from forward areas to evacuation hospitals died en route of the same causes, or later from infectious complications, and an additional

5 to 10 per cent died from infections along the lines of communication or base hospitals.

"The highest mortality occurred in the first 48 hours." (24 hours, Macrae.)

In other words, I am satisfied that the intensive surgery done in Mobile Hospitals behind the firing line saved hundreds of men who would now be dead had they been forced to wait on long-distance transportation to a base where aspiration or other conservative methods sufficed.

Duval in 1916 began the extensive thoracotomy and was soon followed by other French, as well as British and German surgeons. While the statistics from the war are incomplete, the writer claims a reduction of from 100 per cent. to 30 per cent. in severe open wounds of the pleura by the radical method of Duval. Duval claims a reduction of from 50 per cent to 9 per cent. of all classes of chest wounds.

Experimental work on chests of dogs is one thing, and actual thoracotomy on the living human is another. I am satisfied that this difference has not been recognized by the timid or uninformed, and is partly responsible for the tardy discovery that the human chest cavity can often withstand great exposure without serious consequences to the subject.

The controversy now going on as to the relative thickness of the mediastinal partition of dog and man is most interesting and worthy of continued study. The question of a communication between the two pleurae is about settled, and now the consensus of opinion seems to be that no opening exists between the two cavities, either in dog or man.

Graham has shown, however, that by some means fluids pass from one to the other side (in dogs) in a very few moments. This author is particularly anxious concerning the size of the chest opening, and claims 9 square inches as the safety line in the average human adult, although 15 square inches in a man of high vital capacity may be comparatively safe.

Duval, on the other hand, takes issue with our distinguished St. Louis surgeon and is not afraid of large exposures. Graham lays particular stress on the vital capacity of the individual lung to withstand extensive thoracotomy.

The latter position I am sure is correct and probably accounts for the startling statistics of the lung cases in the American Army. The greatest number of wounded were selected men;

soldiers who were almost physically perfect—with extreme youth on their side. Most of these men had high vital capacities which permitted of large openings in the chest wall.

The interesting controversy between Duval in France and Graham in America as to the maximum thoracotomy opening compatible with life, in a subject with a known vital capacity, and in which Graham reminds Duval that in his packing off of the wound with gauze, and even the presence of his hand or arm in the opening, he is thus reducing the size of the wound, has suggested a simple technic which the writer offers as a windshield, so to speak, to reduce the positive pressure from the outside during thoracotomy. After a long inter-rib incision through the pleura a sterile sheet of thin rubber, such as is used in the manufacture of rubber gloves, is pasted by means of glue to the skin of the chest wall. Then an opening of sufficient length is made in the rubber to admit the arms of the retractor. The ribs having been separated, a second sheet of rubber is glued to the first, the latter covering the retractor. A slit is then made in the second rubber of sufficient size to admit the hand of the operator. When the hand or arm is inserted the rubber clings tenaciously to them, thus excluding the pressure of air from without. Then again, if the lung is to be delivered, this organ will be firmly grasped by the rubber without the slightest danger of trauma. If it is true that large openings can be endured but for a short time, anything that may be improvised to aid in the exclusion of atmospheric pressure may help in the perfection of a given technic. I offer this simple, but fairly practical, method for your consideration.

Part 4. The technic of war surgery of the chest, unlike most war surgery in general, may and should be utilized in civil practice.

The writer is an ardent advocate of thoracotomy, delivery of the lung and the arrest of hemorrhage in all acute traumatic conditions of doubtful prognosis, founding his opinion upon the comparison of results of his present series of cases with those of former days.

Exceptions to the rule may be accepted in the consideration of age; previous health of the patient or when the vital capacity is known to be low. Even in these cases, rather than death from inaction, when the only ray of hope is reflected through the knife, action should be

prompt and courageous, as it now exists in the acute abdomen.

Case 1. Hilbert Roll, aged 24 years, found under automobile. Perforation right anterior upper chest and lung by projecting iron of top frame holder of the machine. Brought at once to Edmundson Memorial Hospital, Council Bluffs, by Dr. Ralph Lovelady of Sidney, Iowa, fifty miles distant. Condition on arrival: Undernourished, frail young man supposed to be tuberculous. Shock. Pulse 160, respiration rapid, large sucking wound spraying blood about the room. Operation under ordinary ether anesthesia and morphin. Incision seven inches long between 6th and 7th ribs; retraction of ribs; alarming flow of blood and clots. Lung grasped with ordinary sponge holder and delivered; wound in lung sutured with plain No. 1 catgut. Arm inserted and with gauze sponge cleansed entire pleural cavity of blood and serum. Lung collapsed. Sucking wound closed by plugging and suture. Pleural sac sutured without drainage. Glucose per rectum, normal salt under skin, etc. Patient gradually rallied. Five days later fluid in lower chest was detected. A rising temperature caused us to drain at lowest point. The sinus and small cavity persisted until February 20, 1925. On this date four-inch sections of two ribs were excised, debridement of the thickened membrane over lung and chest. Wound healed promptly and now patient is in better health than before the accident, attending to his daily duties as usual.

Case 2. Paul Cordova, Mexican, aged 23 years. Robust physique. Shot at close quarters by police officer, 38 caliber bullet entered posterior to axillary line about 7th rib left—the missile passed upward and slightly inwards, exit 6th rib left of heart. On entrance to Edmundson Hospital less than one hour after injury, patient found with sucking wound of exit. Patient in shock, rapid pulse, semi-conscious. Evidence of blood in sac. Man immediately removed to operating room. Incision 7 inches long over 7th rib. Rapid subperiosteal excision of rib. Pleura opened and lung delivered. Two bleeding openings in lung closed by purse string plain catgut. Pleura more easily sutured in the absence of rib. Muscles sutured over pleura. Large amount of blood removed from sac. No drainage. Sucking wound closed by suture and dressing. Usual post operative glucose and physiologic salt solution, etc. Patient improved rapidly. No late drainage necessary and no evidence of infection at any time. In spite of collapsed lung at time of operation, Jan. 26, 1925, no evidence of any defect in left chest demonstrable April 4 by either auscultation, percussion or x-ray. Patient now in jail, but in perfect health.

Case 3. George Clausen, aged 31 years, weight 215 pounds; referred by Dr. French of Carson, Iowa. Found with quart of whiskey on person. In attempting to escape was shot by 38 caliber bullet through left chest high up. Transported 26 miles by automobile ambulance to Edmundson Hospital. Wound of entrance on back; anterior exit below second rib nipple

line. Blood and air spurting from wound of exit. Patient in great distress. Rapid pulse. Hemothorax marked. Taken to surgery. Incision seven inches between 2nd and 3rd ribs directly through and across the pectoralis major muscle (not necessary). The man was a giant with unusual muscular development. When muscle was cut the 2nd rib was found badly shattered. Some difficulty was experienced in visualizing the field of operation on account of the constant stream of blood emerging from the wound like a geyser. Lung finally sutured, pleura closed without drainage, although a portion of pectoralis was used to close defect in pleura. Pectoralis sutured with chromic gut. This patient required a secondary drainage on the 10th day, and while the wound closed after a few weeks, the suture line of the pectoralis major became contaminated, causing a portion of the muscle suture line to give away. Finally, however, our efforts were rewarded by complete recovery. The man took French leave from the hospital, but was later captured. Last heard from was in jail, but in excellent physical condition.

Case 4. Mrs. Laura Davis, aged 49 years; home, Council Bluffs, Iowa. Operated on for carcinoma of the right breast, axillary involvement. Radical operation Apr. 12, 1924, Edmundson Hospital, recovery uneventful. Oct. 17, 1925, returned with growth on 4th, 5th and 6th costal cartilages and the right border of sternum. The tumor was the size of an orange, hard and fixed. No other evidence of metastatic complications demonstrable. X-ray of lung negative. No loss of weight and patient otherwise in good condition. I conceived the idea of cutting the three ribs close to their cartilages and then by carefully pushing aside the pleura to be able to remove mass extra pleurally. The attempt was made Oct. 19, 1925. I had proceeded but a short distance when the pleura was opened and then I found a portion of this membrane was incorporated in the mass. With many misgivings, the ribs, pleura, and half of a portion of the sternum were removed en masse. The right pleural cavity and the anterior mediastinum were now widely open. Not only the partially collapsed lung, but the median mediastinal partition were flapping about like a sail in a tempest. To add to the commotion, the heart seemed anxious to add to my distress by attempting to jump out of the thorax. There was no pleura or tissue of any character covering the opening. The lung was then grasped by a sponge holder and pulled into the wound, mediastinum and all, and sutured with chromic 0 catgut to the edges of the wound. Then with an incision downwards the skin dissected over the upper abdomen of sufficient size to permit of a rectus muscle flap to cover lung. This was turned up over the exposed lung and sutured in position. Skin flaps were then brought over surface, one from below and the other from above the wound. These were not quite adequate to completely cover the defect. A surface of rectus muscle the size of a fifty-cent piece was left exposed.

In spite of this the wound healed by first intention, the exposed muscle granulated, and finally covered with skin. The patient made an uneventful recovery

and seemed to suffer no inconvenience from the ordeal, and attends to her usual household duties, etc. The question of recurrence of the carcinoma in this case is of no particular interest to the subject under discussion. The fact that extensive attacks upon the mediastinum and pleural cavity; the exposure of the heart and lung at the same time, and the technic of closure, etc., with the results obtained, does, however, demonstrate the brighter possibilities in store for the unfortunates suffering severe lung injuries.

In closing I wish to take advantage of the opportunity to thank the Chairman of your Surgical Section for the very kind invitation to present this paper before the Illinois State Medical Society.

My hope is that the audience may not deal too harshly with Dr. Kreuscher for his poor selection of the speaker.
Council Bluffs Clinic Bldg.

THE INCREASING MENACE OF CANCER*

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While much, if not most, that is written on cancer is rather a repetition of what is known or generally understood, the subject is one of such extraordinary importance to the American people that even commonplace facts and figures will bear repetition. In any event, it is of value to bring the information down to date and to emphasize on every possible occasion the present-day trend of the cancer death rate which represents perhaps the most alarming aspect of our American mortality problems. According to my recent tabulation for 23 American cities which in 1925 had a population of over twenty millions, the cancer death rate of these cities during the last twenty years has increased from 74.5 per 100,000 to 114. In other words, the cancer death rate has increased during two decades by more than 50 per cent. This is a statement of fact which applies to no other important cause of death which concerns the American public at the present time. It is a statement of fact the far-reaching significance of which cannot easily be exaggerated.

CANCER MORTALITY OF AMERICAN CITIES

An examination of the details of 73 American cities for 1924-25 shows that the rate increased

in 34 of these cities while it more or less declined in 39 cities. For all of the 75 cities the combined rate increased from 111.3 in 1924 to 112.3 in 1925. In 51 of the cities the rates exceeded 100 per 100,000. I have also made up an additional tabulation for 47 additional cities, with a population of about four and one-half million, according to which the rate exceeded 100 per 100,000 in 20 of the cities concerned. In my earlier reviews of 10 to 20 years ago it was rare to find a city where the rate exceeded 90 per 100,000. Today a rate in excess of 100 per 100,000 is a commonplace. The increase is real and not apparent. The increase is a fact and not an illusion. There are idle minds who delight in controversy and in mystifying speculations, but the incontrovertible evidence of the situation cannot be set aside.

Of course, when a specific mortality rate reaches such startling proportions a further increase is not likely to be of very material significance. Not every one can die from cancer but a much larger proportion die from cancer at the present time than at any time in the past.

My statistics are entirely limited to representative American cities for which advance information has been furnished through the courteous cooperation of local health officers, registrars of vital statistics, etc. They are both trustworthy and conclusive.

Cancer Control. Progress in cancer control has been disappointing. Regardless of an immense amount of publicity urging the public towards earlier diagnosis and earlier treatment, the mortality continues to increase. Yet it is a well-known fact that in a large number of cases satisfactory cures are obtained, or that in any event the life of cancer patients is measurably prolonged. In other words, the tendency towards cancer occurrence in the American population is decidedly more pronounced than the tendency towards an increase in the cancer death rate. But present-day efforts to control the disease are feeble and largely ineffective. We are dealing with a vastly more complex problem than is generally assumed to be the case. In my Belgium cancer address I emphasized certain aspects of modern civilization as immediately responsible factors tending persistently towards a higher cancer death rate. The problem is not being solved by laboratory research, although much has

*An address read in abstract before the Section on Public Health and Hygiene, Illinois Medical Society, Champaign, Illinois, May 19, 1926.

been done to improve our understanding of the nature of the cancer situation. The problem will never be solved along preventive lines until there is a better understanding of causative factors which increase the cancer tendencies everywhere among civilized people. The problem can only be solved by going to the root of the situation after a painstaking analysis of cancer data carefully differentiating the different types of cancer and the local rate of incidence which varies widely in different sections. For although two cities may have the same death rate the component parts of the rate may be widely at variance with each other.

Variations in Cancer Incidence. This is the main objective of the San Francisco Cancer Survey which includes about a dozen other cities and communities for which original death certificates have been furnished through the cooperation of local health officers who have been most generous in their support. For certain questions must be answered before the more specific aspects of the problem can be effectively dealt with. Why, for illustration, should the rate for cancer of the stomach for males be 35.2 for Albany, N. Y., and only 23.1 for females? Why should the male rate be 31.7 for Boston, Mass., and 24.8 for females? Why should the rate be only 19.4 for the male population of Buffalo and 17.0 for females? Why should the rate be 27.3 for white males of New Orleans and only 18.8 for white females? Why should the rate be 33.9 for the male population of Chicago and 23.4 for the females? Why should it be only 17.4 for the male population of Portsmouth, Eng., and 12.8 for female? Aside from the wide local variations there are the variations in sex incidence for which as yet not a single accepted explanation has been forthcoming.

Cancer of the Uterus.—Let me give another illustration: Why should the rate for cancer of the uterus be 33.8 per 100,000 for the female population of Albany and only 30.6 for Buffalo? Why should it be only 20.6 for Buffalo and 26.3 for Chicago? Why should it be 32.0 for white women of New Orleans and 52.9 for the colored women of the same city? Finally, why should it be 33.7 for the women of San Francisco, but only 27.6 for the women of Portsmouth, Eng.?

Cancer of the Breast. Let me add certain data for cancer of the breast. The rate for the women of Albany is 29.7, for the women of Bos-

ton, 26.4, for the women of Buffalo 15.0, for Chicago 19.9, for the white women of New Orleans 18.8, for the colored women of New Orleans 16.8, for the women of San Francisco 26.3, for the women of Portsmouth, Eng. 23.0. Until we are able to explain underlying conditions that make for these extraordinary variations in the specific rate of local incidence for certain organs and parts, we shall not be able to make the progress in cancer control that is most urgently demanded by the seriousness of the present situation.

Cancer of the Lungs. In other words, the cancer problem, if it admits of a solution at all, can only be solved, particularly in its preventive lines, by emphasizing the details of the local cancer situation carefully arrived at by means of a painstaking analysis of the facts that are available. It will serve no practical purpose to deal with cancer in the aggregate as long as the component parts of the cancer death rate are not understood. The *Journal A. M. A.* in a recent editorial, for illustration, draws attention to the apparent increase in cancer of the lungs. Few are aware of the fact that this phase of the situation is assuming in certain localities, at least, serious proportions. The male rate for cancer of the lungs is 3.3 for Albany, N. Y., 3.8 for Boston, 2.4 for Buffalo, 3.7 for Chicago, 3.8 for the white population of New Orleans, 0.4 for the colored, but it is 4.9 for San Francisco and 3.0 for the male population of Portsmouth, Eng. I will not go into corresponding mortality differences of the female population for, as regards both sexes, full details will be given in my forthcoming third report of the San Francisco Cancer Survey. But cancer of the lungs is comparatively new in cancer mortality investigations. In 1914 a special census investigation returned 52,420 cancer deaths of all kinds, of which 371, or 0.7 per cent., were due to cancer of the lungs and pleura. According to the report for 1923, which has just been published, out of 86,754 deaths from cancer 1,387, or 1.6 per cent., were attributed to cancer of the lungs and pleura. Yet the technical discussions of cancer of the lungs are as yet merely incidental to general discussions which often serve no practical purpose. In England and Wales in 1923 out of 22,095 male deaths from cancer 405, or 1.8 per cent., were from cancer of the lungs. Out of 26,603 female deaths only 225, or 0.8 per cent., were

from cancer of the lungs. It has been pointed out, however, by Sir John Bland-Sutton that "the lungs are very frequently depositories of secondary cancer, and this is due to the arrest of minute cancer-emboli by the pulmonary capillaries; but the lungs are often invaded as the result of permeation." He mentions Handly as "having made a very careful investigation of the mode in which cancer of the mamma disseminates and shows that it spreads in the thoracic wall by permeation, a slow, progressive, centrifugal serpiginous process, which is an actual growth of the cancer along one or other lines of the parietal layers in continuity with the primary growth." Unquestionably the diagnosis in cancer of the lung is apt to be faulty in that it is more likely to be a secondary growth than a primary one. Yet the evidence in this respect is at the present time inconclusive. It is assumed in death certification that the primary growth is always stated, but a careful examination of death certificates leaves many questions of doubt as to whether a careful distinction was made between a primary and secondary growth. This raises, of course, the question as to whether there is a possible relationship between cancer and tuberculosis. Such investigations as I have made seem to indicate that the two diseases rarely occur in association with each other. The subject is much too technical for me to enlarge upon, but granting that cancer is essentially a disease caused by local irritation, the question may properly be raised whether modern lungs, as the result of dust, gas and smoke exposure, are not more liable to chronic irritation at the present time than in former years.

Sarcomas. Another aspect of the cancer problem which has received inadequate consideration is the true incidence of sarcoma. My own investigations in this direction are as yet unfortunately far from complete. I have ascertained, however, the incidence of sarcomas in a number of cities briefly summarized as follows.

Out of 16,056 cancer deaths of all forms and types 764 or 4.8 per cent. were sarcomas. This combined result is for New Orleans, Boston, Chicago, Albany and San Francisco. The proportion of sarcoma deaths for Albany is extremely low while that for San Francisco is rather high. The details of the information at present available is given in the following table.

TABLE 1
DEATHS FROM CANCER AND SARCOMAS
(Selected Cities)

	Cancer All forms	Sar- comas	Per cent	Males	Fe- males	Average-Age at death	
						M.	F.
New Orleans— white	2041	128	6.3	72	56	44.65	46.34
New Orleans— colored	685	42	6.2	22	20	37.59	44.85
1920-24 Boston	5201	197	3.8	116	81	43.57	47.87
1924 Chicago	3163	157	5.0	72	85	40.25	45.80
1919-24 Al- bany	1012	9	0.9	6	3	*	*
San Francisco	3954	231	5.8	141	90	*	*
Totals	16,056	764	4.8	429	335		

*Not yet available.

The only significant fact revealed by this investigation is that the average age at death in sarcoma is several years lower for men than for women. Approximately it may be said that while the average age at death in sarcoma is about 45 years, for all forms of cancer it is about 60 years. As yet I have not been able to go further into this matter, but it is one suggestive of fruitful results. Sarcomas like other forms of cancer affect practically all parts of the body though in different proportions than carcinomas. For illustration, in the Boston experience there was 1 death from sarcoma of the lip, 14 of the jaw, 1 of the throat, 15 of the neck, 3 of the eye, 1 of the tonsils, 2 of the stomach, 11 of liver, 11 of the peritoneum, 16 of the intestines, 2 of the ovaries, 8 of the uterus, 1 of the generative organs otherwise, 5 of the female breast, 3 of the skin, 16 of the lungs, 1 of the pancreas, 15 of the kidney, 1 of the prostate, 1 of the bladder 1 of the brain, 45 of the bones, 8 of the testis and 18 of other organs and parts.

IS CANCER A PARASITICAL DISEASE?

In conclusion I may very briefly touch upon the alleged parasitical origin of cancer. My own investigations in this respect have all been negative as regards the conclusion that cancer is possibly an infectious disease. I do not think that anyone has ever questioned the possibility that parasitical organisms may irritate the tissues in particular locations and give rise to malignant cell proliferation. The number of organisms of this kind that have been discovered is quite numerous, but not a single one has been identified as being present in all forms of cancer. The recent discoveries by Gye and Barnard have at best only reference to sarcomas which constitute less than 6 per cent. of the mortality from all forms of malignant disease. I have tabulated the facts of cancer deaths by streets and houses

in San Francisco, Chicago and Boston, but I have not yet found any positive evidence of a sufficient concentration of cancer cases in particular sections, or for particular organs and parts, to justify the assumption that the disease was spread through infection. My forthcoming reports on the San Francisco Cancer Survey will contain a wealth of detailed information which, however, yields only negative conclusions. Houses in which more than three or more deaths from cancer were discovered proved to be hotels, lodging houses or apartment houses. It is possible, of course, that other investigators may draw a conclusion at variance with my own and I, therefore, give full publicity to the details to make the evidence accessible to anyone in a position to pursue this line of inquiry further.

Is Cancer Contagious? While this is being written a press dispatch has been published from Berlin dated April 10, 1926, according to which "cancer is not contagious when brought in contact with a healthy human body," in the opinion of Dr. Hans Kurtzahn of the surgical clinic of Koenigsberg University. Dr. Kurtzahn has astonished a convention of German surgeons now in session here by reporting that he had experimented on himself, transferring a patch of cancerous growth from a patient's pectoral gland to his own thigh. The cancer cells, he reported, soon died, being unable to live in a healthy body. In an effort to test whether cancer could be cured through a serum, Dr. Kurtzahn also extracted blood from himself after an injection of cancer bacilli. He reported that he had found negative results in the serum made from this blood. The experiments which were made five months ago left Dr. Kurtzahn perfectly healthy.

Of course, a dispatch of this sort must be read with caution, bearing intrinsic evidence of abbreviation. The last word on the parasitical theory has not been said but, in my own judgment, the whole nature of the disease is opposed to its being an infectious process likely to be attributable to a single causative factor.

Heredity. Like considerations apply in my own case to the clearly perplexing question of heredity. I have examined carefully the personal records of 675 living cancer patients in the City of San Francisco for which questionnaires were filled out by a special investigator, and I find evidences of a family history in cancer or

only 49 or 7.3 per cent. Out of 244 cases of cancer of all forms among male patients examined at the State Institute for the Study of Malignant Disease, Buffalo, N. Y., 37 gave a family history of cancer or 15.2 per cent. These proportions are quite convincing that considering the widespread occurrence of cancer in the adult population the disease shows no substantial evidence of transmissibility from parent to offspring. At the same time I am quite ready to admit that a predisposition to cancer may be inherited. Unquestionably, some bodily proportions and habits which are more or less inherited may be more favorable to one disease than to another, and unless materially modified the same disease may occur in parent and offspring without the disease being hereditary in the accepted sense of the term. In my judgment the evidence derived from animal experimentation under proper conditions or control is not applicable to human beings. I may add to the foregoing the suggestion that those who wish to pursue this interesting question further should consult the recent treatise on "Tumors and Cancers" by Hastings Gilford which contains some extremely suggestive observations well worthy of extended consideration. I will also add some brief remarks by Sir John Bland Sutton to the effect that "heredity is a vexed question in regard to cancer and malignant disease generally, because so much that appears to be affirmative is founded on false facts, that is, on circumstances that cannot be tested or proved. The statement that the father died of cancer of the prostate and the mother of a sarcoma of the humerus, is scarcely a good explanation of the appearance of an embryoma in their daughter. When several members of a family die from cancer of the breast it will be found, on careful inquiry, that they have lived in the same environment. The question of cancerous inheritance bristles with difficulties, many of which are at present insuperable."

By "environment," of course, Sir John Bland Sutton means also identical habits. Children frequently have the same nutritional habits as their parents who permit them to undergo no material modification throughout the course of years. In the light of my investigations I am, therefore, absolutely convinced that while much remains to be explained in the coincident occur-

rence of cancer in the same family, the origin of the disease is not likely to be traced to direct heredity transmission.

CANCER INVESTIGATION OF THE LEAGUE OF NATIONS

The most important recent contributions to the statistical subject of cancer are two elaborate reports of the Cancer Committee of the League of Nations. They are concerned with only two phases of the cancer problem or, respectively, cancer of the uterus and cancer of the breast. They are also limited to only three countries, or, respectively, England, Holland and Italy. They bring out many startling conclusions well deserving of extended and thoughtful consideration. They clearly visualize the complexity of the cancer situation and the imperative necessity of statistical skill in dealing effectively with enormous masses of figures from the medical point of view. The aggregate analysis of such data is by no means a task for amateurs or for those not trained in statistical and medical technique. It is no light task to grasp the significance of true correlation in a wide range of facts derived from sources of a variable degree of accuracy. But the fundamental law of statistics or "the law of large numbers" rigorously adhered to rarely fails to yield conclusions at least approximately trustworthy. Of supreme importance, therefore, is the conclusion of the Committee that "so far as the material accuracy of the statistics is concerned nothing has come to light to modify the opinions already expressed by the experts of the several countries as to the general reliability of the data." This conclusion conforms to my own impression based upon many years of extended investigation.

As regards cancer of the breast, for illustration, the conclusions arrived at that when a comparison is instituted between women equally exposed to risk of pregnancy those who develop cancer are less fertile. Unfortunately, my own investigations are wanting as yet in definite data to support this extremely important conclusion, although my general impression coincides with the statement just made. I hope in the near future to be able to present some useful information on the subject derived from data collected by means of a questionnaire concerned with living cancer patients, in which a fairly trustworthy effort was made to ascertain the

facts of fertility with a due regard to the age and duration of marriage of the women affected with cancer of the breast and the generative organs. On the debatable question of heredity the Committee observes that "clinical statistics prepared in England and the Netherlands indicate no appreciable difference as regards cancer of the breast in the frequency of a certain type of cancer among relatives of women suffering from cancer of the breast and relatives of non-cancerous patients." This conclusion is also supported by my own investigations. On the possible correlation of cancer and lactation, it is said "on this question the Committee draws attention to a very marked difference brought out by the inquiries in the two countries. There is one point of resemblance—the proportion of women in the cancer series who have never suckled their children, is much higher than the control series. However, from other points of view the figures for the two countries differ considerably. In the first place, as regards the cancer series and the control series, the proportion of women in the Dutch series who have never suckled their children is much higher than in the English series. Secondly, however, in the cancer series and in the control series the proportion of women who suckled their children for two years or over is much larger in the Dutch than in the English series. In other words, these statistics appear to indicate that the two extremes, i. e., complete absence of lactation and lactation which may be regarded physiologically as a maximum, are more frequent in the Netherlands than in England. As the non-use of the organs of lactation has generally been believed to be an etiological factor of cancer of the breast, the fact that this non-use is more common in the country in which cancer of the breast is less frequent is of practical interest." But here it requires to be said that the data are far from conclusive and that much more extended investigations are required. Unfortunately, in my own investigations this element could not be taken into account, but I hope to do so some time in the future.

INVESTIGATIONS OF THE BRITISH MINISTRY OF HEALTH

Of really extraordinary interest is a further report on cancer of the breast with special reference to its associated antecedents by Dr. Lane-

Claypon, published by the British Minister of Health. This is unquestionably the most thorough study ever made of any single phase of the cancer problem, and, while many of the conclusions are preliminary, the work, on the whole, leaves the impression that the study has measurably advanced cancer information. Thus, for illustration, the conclusion is arrived at that the women of the control series are more fertile than the women of the cancer series when full allowance has been made for age at marriage and duration of marriage. This conclusion is supported by my own investigations. With reference to the well-known opinion that unmarried women suffer from cancer of the breast at a higher rate than married ones, it is said that "it is now proved that of married women, those who are less fertile, are at a disadvantage." But it is said also that the "data do not suffice to determine the role played by error of lactation." On the alleged duration of the disease before operation, some additional evidence is produced which is of much practical value. Reference is made to Dr. Lazarus Barlow's calculations of the mean natural duration of the disease, according to which the average duration of life in cases in which the disease runs to natural causes and without operation, was found to be approximately $3\frac{1}{4}$ years. But it is pointed out that it is not possible to make any reliable computation as to the mean time before the growth ceases to be local, that is to say, when the lymph glands become involved. The average duration given by different authorities varies from 7.46 months to 15 months, while one author found that the average time at which the glands were involved was 17 months. Figures are, however, of little value since it is generally recognized that some cases run a relatively rapid course, while others take a very slow one. In my second San Francisco Cancer Survey I give a large amount of new information as regards the known duration of the disease previous to death. The averages vary considerably and in all cases must be accepted with caution. But they clearly emphasize the lamentable conclusions that in many cases there was a most regrettable delay in obtaining proper treatment at a time when relief and cure were still within reach.

Hospitalization of Cancer Cases. My own investigations also present information concerning the hospitalization of cancer cases. Approxi-

mately, it may be said, that from 50 to 60 per cent. of those who died from cancer in large cities died in hospitals. In almost the same proportion of cases there was a preceding operation. If the public could be given clearly to understand that both hospital treatment and operation are practically a certainty in due course of time, while the hope for a cure or effective relief diminishes in proportion to the intervening delay, some effect may possibly be had upon those of intelligence who may be made to realize the great importance of the earliest possible treatment as a means towards an effective cure.

CANCER IN AUSTRALIA

The Commonwealth of Australia has recently published an intensely interesting statistical study on the cancer mortality throughout the different states of Australia. It is probably one of the best publications of its kind available, suggestive of standardized methods of presenting cancer facts for other countries. It clearly emphasizes the rapid increase in the cancer death rate during recent years which in Australia has risen from 26.1 per 100,000 in 1870 to 57.9 in 1900 and to 89.1 in 1923. The rate for males in Australia during that year was 90.7 and for females 87.5. The conclusions of the investigation as summarized among others is the statement:

1. That there is a real and very serious increase in our cancer mortality.
2. That mortality from cancer of the digestive tract is the outstanding factor in connection with the increase in cancer mortality of recent years.
3. That cancer of the skin and of certain special organs, notably the prostate and lungs, have shown a remarkable increase in mortality of recent years.
4. That mortality from cancer of the female genital organs has played very little part in recent years in the increase of cancer mortality.
5. That cancer of some organs, notably of the tongue and of the liver, shown an actual or apparent decline in mortality.
6. That cancer mortality in general shows a marked tendency to concentrate in age groups, 55 to 69 years, the percentage of total cancer mortality occurring in age groups prior to 55 years and subsequent to 69 years showing a corresponding decline.
7. That with the cumulative effect of causative factors, it is possible that cancer is tending to attack and cause its mortality earlier in life as time goes on.
8. That in the female cancer causes death, as a rule, earlier than in the case of males, but this does not hold in the case of cancer of all organs.

9. That cancer of the female genital organs and breast causes death much earlier in general than is the case with cancer of other organs.
10. That sarcoma plays little or no part in the increasing mortality from cancer in general.

CANCER IN NEW ZEALAND

Another also extremely important statistical investigation of cancer has recently been published by the Government of New Zealand. It also admirably presents the essential facts of the cancer situation such as we are urgently in need of for this country. It includes a table of standardized cancer death rates from 1872 to 1924 suggestive of an increase in cancer mortality from 38 per 100,000 in 1872 to 61 by 1900 and 86 by 1924. It fully confirms in a general way the corresponding statistics for the Commonwealth of Australia. It includes an exceptionally interesting table of cancer cases in public hospitals analyzed by organs and parts, age, sex and length of hospital stay. These tables are particularly suggestive of corresponding investigations in this country for, broadly speaking, no use whatever is made of our institutional records, although they could yield much information of value.

INDUSTRIAL INSURANCE EXPERIENCE

Another statistical investigation of cancer with a due regard to specific organs and parts of the body has recently been published by the Metropolitan Insurance Co. It is an admirable contribution to cancer knowledge, limited, however, in its practical application by the fact that it represents a selected body of insurance risks not strictly comparable with the general population. It may also be questioned whether the rates for different years are strictly comparable in view of the great difficulty of arriving at a strictly correct basis of the exposed to risk which in the case of the company referred to, are represented in the first place by policies to which a factor of correction is applied to reduce policies to persons. The method by which this is done for the different years is not explained. The standardized cancer death rate of this company shows an increase in cancer mortality from 82.6 in 1911 to 88.7 in 1922. Other statistics for the general population indicates a more pronounced increase and are probably more trustworthy. The charts showing fluctuations from year to year also do not conform to the corresponding charts for the population at large. The investigation, however,

reflects commendable enterprise on the part of the company concerned since it represents the company's experience and is of value for insurance purposes. But it would be going too far to apply data of this character to the general population without a due regard to all the facts that are involved. It confirms in a general way the conclusion that cancer is on the increase and as to this certain, specific facts may be quoted. Cancer of the buccal cavity remained practically unchanged during the period of 1911-1922. Cancer of the stomach and liver increased from 65.0 to 65.9. Cancer of the peritoneum and intestine and rectum from 19.6 to 22.6, cancer of the female breast increased from 28.4 to 29.6. These rates are all for ages 25 and over and they must, therefore, not be compared with rates based on the population at all ages. For ages 45 and over, which is for certain purposes to be preferred, cancer of all forms increased from 349.4 in 1911 to 379.0 in 1922. Cancer of the buccal cavity declined from 15.5 to 14.4, cancer of the stomach and liver increased from 148.8 to 152.5, cancer of the peritoneum, intestine and rectum increased from 48.2 to 48.6. Cancer of the female generative organs increased from 51.2 to 54.3. Cancer of the breast increased from 24.2 to 29.0, cancer of the skin declined subject to considerable fluctuations, during the period from 10.3 to 9.8. Cancer of other organs and parts increased from 57.2 to 69.5. In a general way, then, the Metropolitan experience would seem to confirm the conclusion otherwise arrived at that cancer is increasing, although at a variable rate for certain organs and parts, while for some organs and parts there has been a slight decline.

CANCER AND OCCUPATIONS

One of the most important aspects of the cancer problem concerns the influence of certain occupations. The most important recent contribution to this phase of the cancer subject is an investigation into the statistics of different trades and professions published by the British Medical Research Council. It is a wholly admirable study which cannot be ignored by any one who desires to grasp the fundamentals of the present cancer situation as it affects the male element of the population. The publication can not be conveniently summarized for the present purpose, but I would fail if I did not draw attention to its really extraordinary value as an aid

towards the better understanding. I will quote the summary of conclusions in the following paragraph:

When we come to summarize briefly the results of the present investigations, it must be acknowledged that, though confirmatory evidence has been obtained of some views already more or less generally accepted as to the close association of some types of cancer with exposure to particular risks incurred in certain forms of employment, e. g., chimney-sweeps' cancer and mule-spinners' cancer, evidence in support of such a connection between the nature of the employment and other forms of cancer, especially those localized internally, cannot be regarded as more than suggestive. In some occupations the excessive indulgence of habits like smoking and drinking, which the nature of the occupation permits or facilitates, appears to be the important predisposing factor and not anything inherent in the employment itself, while the incidence of syphilis in different occupational groups seem to have some association with that of lingual cancer. In the data examined it is not uncommon to find, however, in occupations an excessive mortality from cancer in certain sites for which no apparent explanation can be found in the industrial risks. This emphasizes the fact that occupational risk is only one of several predisposing causes of cancer which are operative in different instances or under different circumstances and supports the view that the discovery of any one specific factor is not likely to provide a solution of the complex problem of the origin of the disease.

This conclusion fully supports what I have tried to emphasize on a number of occasions that there is not a single cause of cancer, but a multiplicity of conditions and circumstances that account for the development of malignant self-proliferation. I am firmly convinced that we are dealing with a vastly more complex problem in cancer than is generally admitted to be the case and that the hope of finding a single cancer cause is absolutely futile. I am fully aware that this conclusion does not coincide with the general belief that a single cancer cause can be found, or will be found, but of the many statements that have been made to this effect, not a single one has stood the test of subsequent experience. The recent discoveries by Gye and Barnard, of which much has been made in the public press, have apparently been of no practical value whatever. They, in any event, apply only to sarcomas which contribute to but approximately 6 per cent. of the cancer mortality of all forms and types.

Radioactive Water and Salt. Of the suggestions that have been made to me as to cancer

causation I would first call attention to the views of Lieut. Col. Hildebrand of London, who is strongly of the opinion that radioactive properties of common drinking water are a direct incentive element and there is considerable evidence that would seem to support his views. This phase of the question should be thoroughly investigated, for it is certainly a rational explanation of what otherwise seems inexplicable. Another writer, Mr. Marwood, of London, is strongly of the opinion that the excessive salt consumption of modern civilized people is a direct causative element and he also offers much evidence in support of his views. Here again it would seem quite logical that excessive quantities of salt introduced into the system may act as an irritant; may aid in producing conditions that favor malignant cell proliferation. It would certainly seem to admit of no controversy that the amount of salt in the modern diet is for all nutritional purposes decidedly excessive. Conversely it would appear that native races among whom cancer is extremely rare, are generally such as are not excessively addicted to the salt habit.

Dietary Aspects of the Problem. It is my own conviction, based upon extended consideration, that the whole dietary problem of modern life is largely responsible for the extraordinary frequency of cancerous affections of the gastro-intestinal tract. If there is anything more irrational than the modern diet, from a nutritional point of view as regards essentially all needs, I am not aware of it. The modern diet is largely an artificial diet, suffering either from an excess or a deficiency of vitamins in contrast to the natural dietary habits of the past and as still typified by uncivilized races at the present time. But food analysis is but one of the phases that requires painstaking investigation. The effect of different food materials on the human body is as yet but imperfectly understood and subject to a wide range of human idiosyncracies best summed up in the statement that "what is one man's meat is another man's poison." But as far as I am able to interpret the evidence, there can be no question but that the modern diet is largely deficient in mineral salts which contribute so materially towards a proper cell balance, the breakdown of which in its last analysis in all probability is one of the chief underlying causes

of malignant cell proliferation in the human body.

CANCER AND CIVILIZATION

We may, therefore, summarize our present-day knowledge of the cancer situation as applicable to public requirements in the statement that cancer is the result of a multiplicity of causes and conditions which have their origin to a large extent in our present day mode of civilized existence. Furthermore, that the disease unquestionably in many cases is of a dietary origin and, therefore, subject to modification and control. But the outstanding fact of all investigations is that a large proportion of cancer deaths at the present time are the immediate result of an unpardonable delay in the seeking of qualified treatment at a time when a cure is possible and when a measureable number of years may be within reach. Cancer prevention then at present is largely an illusion, but the prevention of deaths from cancer is possible in perhaps one-third of the cases and easily from ten to fifteen years can be added to the average lifetime of cancer patients by qualified treatment with the reasonable assurance that ultimately death will be due to some other cause than malignant disease.

REPORT OF PHYSICAL EXAMINATIONS FOR DENTISTS AT THE SIXTY-SECOND ANNUAL MEETING OF THE ILLINOIS STATE DENTAL SOCIETY, AT SPRINGFIELD, May 13, 1926

S. E. MUNSON, M.D.

Councilor, Fifth District

SPRINGFIELD, ILL.

On account of the health examinations that were made by Chicago physicians for members of the Illinois State Dental Society at the Drake Hotel, Chicago, last winter, it was decided by the Lay Education Committee of the Illinois State Medical Society and the Lay Education Committee of the Illinois State Dental Society to attempt such an examination at the Illinois State Dental Meeting, held in Springfield, May 11-13, 1926. Results of the examinations made on forty-seven dentists at the meeting at the Drake Hotel were so far reaching that it was decided to put over a similar examination of

the dentists at Springfield even more thoroughly and in greater numbers.

At first when the matter was brought to the attention of the officers and a committee of the Sangamon County Medical Society at Springfield, by Dr. Hutton, it was thought it would be impossible to conduct the examination in very large numbers with anything like an extensive examination. After a meeting of the officers and committee of the Sangamon County Medical Society, these difficulties were overcome and plans made for conducting the examination.

The examination was held by eighteen physicians and two men from the Illinois State Laboratory on May 13, beginning at 9 a. m. and ending at 12:30. Seventy-nine dentists were examined. The papers were looked over by the committee having the matter in charge, and following is a tabulation of the abnormal findings:

Eye, Ear, Nose and Throat—	
Glasses needed	13
Irregular pupils	2
Deflection of Septum.....	3
Nasal obstruction	3
Inflamed tonsils	1
Heart	9
Lungs	1
Urinalysis—	
Albumin	1
Sugar	5
Specific gravity:	
Low	1
High	4
Amphoteric	1
Wassermann—	
Negative	59
Positive	0
Weight—	
Over	10
Under	22
Blood Pressure—	
High	5
Low	22
Temperature—	
Above	2
Below	17
Neurological	13
Dental, exclusive of X-ray findings.....	22
General Inspection—	
Flat Feet	12
Spinal Curvature	20
Gall Bladder	1
Hernia	2
Enlarged abdominal rings.....	6
Deformities	3
Skin disease	4
Goiter	1
Members of Sangamon County Medical Society and one from Morgan County who conducted this examination were as follows:	
Dr. N. P. Armstrong, Springfield.	
Dr. A. B. Aschauer, Springfield.	
Dr. Hermon H. Cole, Springfield.	
Dr. H. B. Henkel, Springfield.	
Dr. R. F. Herndon, Springfield.	
Dr. J. W. Kelly, Springfield.	
Dr. H. P. Macnamara, Springfield.	
Dr. G. J. Mautz, Springfield.	
Dr. C. V. McMeen, Springfield.	
Dr. H. L. Metcalf, Springfield.	
Dr. S. E. Munson, Springfield.	
Dr. F. G. Norbury, Jacksonville.	
Dr. Harry Otten, Springfield.	
Dr. N. Rosen, Springfield.	
Dr. E. S. Spindel, Springfield.	
Dr. C. B. Stuart, Springfield.	
Dr. F. L. Taylor, Springfield.	
Dr. R. H. Woodruff, Springfield.	
Kirby Henkes, State Laboratory, Springfield.	
Thos. G. Hull, State Laboratory, Springfield.	

Acknowledgment is hereby made of the valuable assistance of Dr. Hutton and Miss Keller

of the Lay Education Committee of the Illinois State Medical Society, and Dr. H. B. Henkel, President of Sangamon County Medical Society, and his committee, Dr. P. L. Taylor and Dr. J. W. Kelly, and the members of the Sangamon-Menard County Dental Society, who had this in charge.

Following is a letter to Dr. Robert H. Woodruff, Secretary of Sangamon County Medical Society:

Springfield, Ill.,
May 26, 1926.

Dr. Robert H. Woodruff, Sec'y.,
Sangamon County Medical Society,
Springfield, Ill.

Dear Doctor Woodruff:

I wish to bring attention to the Sangamon County Medical Society, through you, to a letter received from Dr. P. A. Pyper, Pontiac, Chairman of the Clinic Committee of the Illinois State Dental Society, with the following statement:

"I wish to express through you to your members of Sangamon County Medical Society my sincere thanks and appreciation for putting on this examination, especially those who did the work. We are putting forth every effort we can to establish periodical examinations and I know your men, by doing what they did for us, will have widefelt influence toward establishing that work."

Trusting you will read this at our first meeting, I am

Truly yours,
(Signed) S. E. MUNSON,
Councilor, Fifth District.

Also a letter from Dr. Albert E. Converse, Secretary of Illinois State Dental Society, as follows:

Springfield, Ill.,
May 28, 1926.

Dr. S. E. Munson, Councilor,
Fifth District, Illinois State Medical Society,
Springfield, Ill.

My Dear Doctor Munson:

The Illinois State Dental Society acknowledges with deep appreciation the services rendered by members of the Sangamon County Medical Society in conducting physical examinations during the recent convention of the Illinois State Dental Society in Springfield.

The outstanding success of this feature of the

meeting was in no small degree due to the fact that you were keenly interested in it personally and that you gave to it generously of your time and energy.

Very truly yours,

(Signed) ALBERT E. CONVERSE,

Secretary, Illinois State Dental Society.

On account of the large number of dentists who availed themselves of this opportunity to be examined, it is believed that the value of this examination will be appreciated by the dentists of the state and this excellent example of the periodic health examination as a branch of preventive medicine will be carried home by the dentists to their patients, thereby associating this personal examination with that of their patients, and stressing the need of this in connection with their campaign of Oral Hygiene.

UNUSUAL DERANGEMENTS OF THE KNEE*

C. R. G. FORRESTER, M. D.

CHICAGO

In reporting these two cases we do so with the idea of putting before the medical profession two unusual conditions which have come to my attention in the recent past, in which we have been able to arrive at a solution from a surgical standpoint, that has apparently been beneficial to both parties operated on and in both instances the cases have been kept under observation long enough to justify me in presenting them before you as being successful and having passed the experimental stage.

The first case is that of a slipping patella or chronic dislocation of the patella. The patient is a young girl, twenty-five years of age, who seven years ago slipped and fell down a stairway, landing in a sitting position with the right leg crossed underneath her, tailor fashion. This injury happened at her home in Iowa and her family physician applied a plaster cast the following day which remained on for thirteen weeks. The cast was then removed and passive and active use of the limb started, with the result that she then noticed a slipping of the patella outward. This condition increased in severity right along to such an extent that it would slip out of place on the slightest occasion and she would fall to the ground. She would have to be

*Address before Chicago Medical Society, April 6, 1926.

assisted up and then occasionally the patella would slip back in place or she would have to manipulate it. Even walking along level floor it would dislocate, as she expressed it, "It would give way when tripping or stumbling or anything." Gradually for a period of seven years she developed a compensatory feature of guarding herself against this condition as much as possible, but even then there were often recurring dislocations.

August 18 she came to me for examination, referred by a physician in her part of the country. At that time I had no idea as to any literature on the subject and told her that I would consider her case and proceeded to work out an operation on the cadaver first.

June 25, 1925, she was admitted to the hospital and the operation was performed by making an incision on the outer side of the right thigh, from the junction of the middle and upper third down to the external condyle, Lane technique and tourniquet. An incision on the outer side of the patella about one inch long, one on the inner side of the patella same length, down to the lateral surfaces of the bone. An inch incision over the inner condyle of the femur down to the bone. Through the lateral incisions of the patella two horizontal holes were drilled through the substance of the bone about one inch apart. Then two holes at right angles into the condyle of the femur making a loop in the bone. Then twelve inches of the fascia from the thigh was removed, approximately three-eighths of an inch wide. This was rolled in form of a cigarette, a silk suture attached to one end and that to a carrier. This was passed through the lower opening on the patella, then looped through the hole in the condyle of the femur, carried back subcutaneously to the opening on the inner side of the patella, then carried through the horizontal upper opening in the patella, thus making a complete loop from the patella to the condyle. Then with the patella over-corrected by forcing it to the inner side, the two exposed ends of the fascia were sutured together and to the periosteum of the patella. The small wounds closed with silkworm, the fascia on the thigh closed with No. 2 Pyoktanin catgut interrupted sutures and the skin wound closed. A large dressing applied with a plaster cast with the knee in five degrees flexion. Post-operatively she progressed favorably with no infection.

August 10 the cast was removed entirely, showing about fifteen degrees flexion of the knee joint with no evident change in the position of the patella. Remarks made on my files at that time were "Too early to decide ultimate outcome, but instructed to gradually obtain more motion in the knee."

November 23 she came to the office advising that during the last few days, while going about, she fell upon the knee, not through any slipping of the patella but purely through accident. An examination did not show any undue swelling, no definite areas of tenderness and x-ray showed no evidence of osseous traumatism. Circumferential measurements were right $13\frac{5}{8}$ and left $13\frac{1}{4}$. In my opinion her fall did not do any damage, so I instructed her to continue with her occupation.

Subsequent to my examination of her in August she returned to work the middle of August, 1925, as a school teacher. Numerous communications from her advised that she was suffering no further inconvenience.

On examining her at the present time I find that there is three-fourths of an inch atrophy of the muscles of the thigh of this limb, and on flexing the knee joint there is still a slight slipping of the patella laterally outward. I attribute this condition to the fact that for seven years she had suffered from this affection and naturally the inner surface of the patella had undergone changes in its articular surfaces proportionate to the amount of friction produced by continual dislocation during growth, with loss of muscular expansion.

She advised me that she could now do any of the things that young girls of her age do, such as dancing, running, walking over uneven surfaces, walking up and down stairs in fact does not realize that she ever had a lesion. In order to confirm her statement, through the courtesy of the Almer Coe Co., who have a very excellent moving picture outfit, I, with her consent took pictures of her going through certain motions that she could not do before operation, in order to prove the end result. She would have been glad to be present, but on account of her vocation could not do so, so submitted to the taking of the pictures. Incidentally I might state at this point that I considered that I had accomplished quite an unusual piece of surgery, particularly as regards the end result, until I

came in contact with the *British Journal of Surgery* of 1924, in which I found that Robert Gallie of Toronto has performed the same operation successfully.

DERANGEMENT WITH RUPTURE OF THE CRUCIAL LIGAMENTS

This I find is a much discussed injury, considerable literature having been written on it over all parts of the country. The particular case that I shall show tonight is a man that I was called to see October 6, 1922. At that time he was employed as a electric crane operator and in a fall sustained a complete dislocation of the tibia and fibula forwards and upwards, so that the head of the tibia could be felt lying in front of the femur. An x-ray was taken which confirmed the diagnosis, but unfortunately has been lost.

There was no apparent involvement of the vessels or nerves. Under an aesthesia reduction was easily made and a plaster cast applied with the knee in approximately twenty degrees flexion, the cast extending from the thigh to the toes. (This is the selective position advised by Sir Robert Jones for this form of injury with the idea of approximating the torn crucials.)

On November 27, 1922, approximately eight weeks later, I removed the plaster cast. I was disappointed in finding that there was still considerably play in the knee joint and my assumption was that the ligaments had failed to heal. In order to give this man the benefit of the doubt, however, I applied an English knee cage and at that time prognosed a doubtful recovery with probable surgical interference and six weeks further observation.

On January 4, 1923, he was still wearing the knee cage, and considerable swelling about the knee and play at the articulation. I still advised the wearing of the knee cage.

On January 16 the prognosis was still unfavorable although there was evidence of healing of the posterior ligament but not of the anterior, and at this time I advised him considering an operation. On February 22, 1923, he was admitted to the hospital for this operation.

At this point I wish to state that in looking up the literature I could not find anything that appealed to me as being practical, so before operating upon this man, I went to the Institute of Surgical Technique and worked on two cadavers, formulating an operation that I thought would

be practical. After working this to a conclusion I took the matter up with the patient and advised him that it was purely an experiment, but that it was about the only thing that I could see that would be of any value to him, but if he was willing to submit to the operation I was willing to try it. He agreed to the operation, and on February 28, 1923, I operated upon him.

A lengthy incision was made on the outer side of the thigh from the junction of middle and upper third down to, around, below and to the inner side of the patella. I might state at this point that this entire work was done under Lane technique, even to the tying of the sutures with forceps and with the assistance of a tourniquet. This entire skin incision permitted of a subcutaneous dissection, throwing the entire flap over giving a complete exposure of the fascia and the patella. The knee cap was sawed perpendicularly in and through to the inner surface, but upon reaching that point a broad chisel was inserted and the inner surface of the patella fractured. An incision carried from the point of fracture upwards clear through the quadriceps, a matter of three inches. Another one lengthways from the lower margin into the patella tendon, the patella drawn apart with retractors and the ligamentum mucosa severed. At this point the limb was then dropped over the end of the table to right angles, the patella drawn apart and in fact with the knee flexed these two fragments would naturally separate. It was then discovered that the posterior crucial ligament had healed. The two tag ends of the anterior crucial were lying free in the knee joint unattached. I proceeded to do a subperiosteal resection on the inner side of the tibia and a subperiosteal resection under the crureus of the femur. I then used a Murphy drill and drilled a hole up through the inner head of the tibia, coming out through the long axis of the remains of the crucial. Then on the outer side of the condyle of the femur retracting the crureus, I drilled a hole down through to the long axis of the ligament at this point. I then made an incision on the outer side of the thigh and removed about ten inches of the fascia, half an inch in width, completely detaching it, then attaching a silk ligature to one end of it and a carrier, I proceeded to pass the carrier through the upper opening down through the axis of the ligament coming out at the lower opening of the tibia. I

then placed the limb in the position of twenty degrees flexion, took up the tension of the ligament leaving approximately one inch exposed at either end, which I laid flat on the bone and sutured the muscle over it and periosteum of the condyle and the same on the periosteum of the tibia. I then introduced a No. 00 Pyoktanin catgut in the ligamentum mucosa for repair, wired the patella with two transverse wires, sutured the incision in the quadriceps and patella aponeurosis with medium Kangaroo, making a point during the entire procedure to emphasize the importance of maintaining the limb in twenty degrees flexion, closed the line of incision on the side of the limb with No. 2 interrupted Pyoktanin catgut, closed the skin layer with interrupted silkworm sutures.

I may say at this point that before closing the knee joint, but after the various ligaments had been placed in position, I saturated the entire joint with a combination of sterilized powdered iodoform combined with ether, using approximately two ounces of the powder to four ounces of the liquid.

After the tissues were closed I applied a plaster cast from the thigh to the toes, still maintaining twenty degrees flexion. The man was returned to bed in good physical condition. He returned to his home on March 15, 1923.

On April 11 an examination in my office revealed that there was still some slight amount of play in the knee but not as much as existed prior to the operation. On April 11 I removed the cast and applied the knee cage which he had worn previously. He wore this knee cage until June 14, 1923, and an elastic stocking was then applied. At this time he had flexion to within twenty degrees of right angles.

In talking with this man since the operation he advises me that he has been working since June 15, 1923, the operation being February 28, 1923. "I have been working since that time uninterruptedly and with no loss of earning capacity," according to his own statement. At the present time he is occupied as a foreman handling the boilers of the Great Lakes Naval Station.

Through the courtesy of the Almer Coe Co. I have taken moving pictures with their machine, and I will attempt tonight to show what this man can do of his own accord.

At the present time I can determine little or

no play at the knee joint. The only disappointing feature that I have been able to determine in this case is that I was not able to give this man complete flexion, for it is little better than right angle flexion with full extension, but under the circumstances I suppose one should not complain.

I have refrained from writing up this case, discussing it in any way whatsoever, because of its purely experimental features, until such a time when I could prove by subsequent observation, and one might say ocular demonstration, that this man has continued on in his occupation for a sufficient period of time to prove to me that it is a practical one.

It is one thing to describe an operation and emphasize the important points of the operation together with the technique of it, but it is a decidedly different thing to be in a position to know that it is of practical advantage to the patient which is the real object that we are trying to accomplish by surgery, and for that reason I have gone to considerable trouble, time and expense, with patient waiting, in order to demonstrate a complete cycle in these two cases of an actual injury, a definite disability, the operation, the technique of the operation and the observation of the patient for a length of time sufficient to confirm the theory of the operation.

Please understand that in reading this paper I do not want the profession to misunderstand me and be under the impression that this is a repair that is successful for both anterior and posterior crucial ligaments; in fact, I am not positive that this operation is a success in every case of anterior crucial ligament, but in view of the fact that this is a case that has been kept under observation for three years, I feel justified in publishing it so that other surgeons can at least give it a trial.

AND YET IS NOT UNLIKE THEM

Satan, according to one Western clergyman, is busy in the colleges. In that respect Satan differs from the great mass of under-graduates.

—*New York Times.*

MODERN BUILDING

The Contractor—"Yes, I can save you a few thousand dollars in work and materials without spoiling the looks of the house but it won't be fit to live in."

The Owner—"Hop to it. I'm not building it to live in. I'm building it to sell."

THE MANAGEMENT OF HYPERTENSION IN PREGNANCY*

EDWARD J. STIEGLITZ, M. S., M. D.

CHICAGO

Arterial hypertension as a complication arising in pregnancy is sufficiently frequent and serious to warrant careful consideration by internists and obstetricians alike. It must be constantly borne in mind that hypertension *per se* is but a symptom of vascular disease. However, it is something more, it is an index to the severity of the vascular damage. Therefore any logical therapy must of necessity be directed toward the vascular injury and particularly in the direction of the etiologic factors responsible for the vascular disturbance.

Views concerning the etiology of vascular disease are as numerous as they are conflicting. There is no time or space for an adequate discussion of these here¹. Any systemic intoxication of infectious, exogenous or endogenous origin must be considered an important factor. Conspicuous among these are the intoxications from foci of infection, from excessive fatigue and worry, and from metabolic disturbances such as occur in pregnancy, and thyroid disease. The clinical types of hypertension met with in the pregnant woman may be classified into four chief groups as follows:

1. A relatively benign type, occurring moderately early in the pregnancy (in the fifth or sixth month), characterized by a gradual rise in blood pressure and evidences of a mild *nephrosis*. These patients are not very toxic. The incidence of active foci of infection in this type is very high and is undoubtedly of etiologic significance.

2. A late, malignant type, occurring with a sudden unheralded onset, a rapid rise in arterial tension and evidences of marked intoxication, quickly becoming a true eclampsia, with hepatic as well as renal and vascular damage.

3. Hypertension in pregnancy in patients with pre-existing vascular and usually renal disease, both undergoing exacerbation during the pregnancy.

4. Hypertension with definite complications such as thyrotoxicosis, cardiac disease, acute nephritis, acute infections or obstetrical difficulties.

The first step in the management is necessarily

a careful study of the situation and the correct classification of the type. Much light may be thrown upon the pathogenesis of the disease by careful consideration of the past history of the patient, particularly anent any hereditary tendency to vascular injury, past infections, fatigue, previous pregnancies, dietary and hygienic habits. Careful search for foci of infection and an attempt to evaluate at least approximately the cardiac and renal efficiency are essential.

The elimination as soon as possible of any source of intoxication is of paramount importance. Dental sepsis, frequently in the form of alveolar abscesses in devitalized teeth, is all too common. The striking improvement that so frequently follows the prompt removal of such foci is surely more than coincidental. Upper respiratory tract infections should receive careful attention. Sources of vascular irritation in the dietary should be deleted at once, particularly the condiments and spices containing irritant volatile oils, and the seasoned meat extractives such as broths and gravies. Too radical restriction of protein intake is inadvisable², particularly in view of the active anabolic metabolism of the fetus. Thyroid intoxications, not infrequent in pregnancy, require careful observation and attention; the cautious use of Lugol's solution often being sufficient to control the disturbance.

The third procedure of attack is the promotion and stimulation of elimination of toxic products. In the absence of distinct cardiac contraindications the drinking of liberal quantities of bland fluids is to be encouraged. At least two to three liters of fluid should be the daily consumption. This is indicated even in the presence of diffuse toxic edema³. The early use of digitalis in conjunction with rest in every case showing the slightest evidence of cardiac failure is of great value in avoiding serious cardiac difficulties during the strain of labor. The strenuous use of cathartics is associated with considerable risk, particularly near term. Sweating and venesection are usually unnecessary, and the former rather dangerous.

The judicious use of sedatives has proven to be of considerable assistance. Their purpose is two-fold: First, to enable the patients to really relax when trying to rest; second, there may be a direct vasomotor sedative action. Of the latter phenomenon, however, there is no proof. Sodium

*Read before the South Side Branch of the Chicago Medical Society, March 25, 1926, Chicago Lying-In Hospital.

bromid in doses of ten to fifteen grains three or four times per day has been employed extensively¹. Phenobarbital in doses of one and one-half grains, two to three times per day may be used in those unable to tolerate the bromids. It must be kept in mind that the effect of the latter drug becomes less and less marked as a tolerance develops⁴. Mosenthal⁵ has recommended small quantities of chloral hydrate in hypertensive cases. In pregnancy its value is doubtful, particularly as it is a cardiac poison.

Vasodilator drugs such as the nitrites and veratrum viride are of little value. The very transient fall in blood pressure with rapid rise to the pre-existing level is probably more injurious to the myocardium than a steadily elevated tension. There is no physiologic or etiologic basis for their use, and purely symptomatic therapy is unjustified so long as the symptom involved causes no undue distress to the patient. The artificially lowered vascular tension may give rise to a dangerous erroneous sense of security.

If, in spite of the therapeutic measures outlined briefly above, the blood pressure continues to rise and intoxication increases, the internist must gracefully admit defeat and advise prompt termination of the pregnancy. In the second type of cases, the impending or true eclamptics, there should be no time lost in medical therapy, but the uterus should be emptied *without delay*. It can not be too strongly emphasized that digitalis is indicated in all toxic cases or those presenting evidences of cardiac embarrassment.

The prognosis in the first type, the nephrosis of pregnancy with focal infection, is usually good. These women ordinarily go to term if properly cared for prenatally, and apparently recover completely, or almost completely, following delivery. In the eclamptic form the immediate outlook is notoriously precarious, but if recovery takes place there is little evidence of residual permanent damage. Subsequent pregnancies are often uneventful. Those patients in which the condition consists of an exacerbation of a previously existing chronic vascular disease frequently display the greatest elevations in blood pressure. The immediate outlook depends largely upon the severity of the intoxication of the present gestation. The future health of these women is rarely good; the vascular disease persists despite all therapy, and is greatly aggra-

vated by each succeeding pregnancy. The prognosis, like the therapy, of the fourth, or last, group is an individual problem, varying with the nature and severity of the complication. Careful continuous, frequent pre-natal care along the lines outlined above can do much in reducing the morbidity of hypertension in pregnancy.

310 S. Michigan Blvd.

1. For a resume of the literature and more recent work see: Post, W. E., and Stieglitz, E. J.: *Am. Jour. Med. Sci.*, 171, 648, 1926.

2. Peters, J., and Bulger, H.: *Arch. Int. Med.*, 27, 153, 1926.

3. McClure, W. B., and Aldrich, C. A.: *J. A. M. A.*, 81, 293, 1923. Aldrich, C. A., and McClure, W. B.: *J. A. M. A.*, 82, 1425, 1924.

4. Gruber, C. M., Shackelford, H. H., and Ecklund, A. M.: *Arch. Int. Med.*, 36, 366, 1925.

5. Mosenthal, H. O.: *Med. Clinics N. Am.*, 5, 1139, 1922.

THE X-RAY IN APPENDICITIS*

M. J. HUBENY, M.D.

CHICAGO

In presenting this subject my object is to assist in placing this much maligned and somewhat ignored method of diagnosis on a plane equal to any other specialty in the domain of medicine. Even though extensive mechanical and electrical devices are used, the mental processes are still operative.

Acute appendicitis does not offer a very fruitful field for roentgen diagnosis, because the usual clinical methods suffice for proper recognition. Occasionally one might be illumined in a left-sided appendicitis, in which case a careful fluoroscopic examination during the administration of an opaque enema will reveal a case of transposition.

The vagaries of chronic appendiceal involvement often render the diagnosis difficult. Atypical symptoms in some cases lead to a faulty diagnosis and after the removal of the appendix it is found to be uninvolved and the condition of the patient remains as heretofore. The appendix has frequently been removed when the real cause of trouble was a stone in the urinary tract, especially in the lower right ureter, tuberculous peritonitis, tubercular mesenteric glands, painful right inguinal hernia, pleurisy, etc. This is a sin of commission because of the attendant operative risks and also because an organ has been removed which may have a function. Conversely, if a chronic appendiceal condition exists and its existence is not recognized there is permitted not only the presence of an inflammatory organ but

*Address before the North Shore Branch of the Chicago Medical Society, November, 1925.

also the development of functional and organic derangement, first in the appendix itself; second, in neighboring and associated organs. It is a well-established fact that when a patient has once had an attack of appendicitis that there is liability of recurrence unless the appendix has been removed. It is, therefore, evident that any method which will assist our present means in attaining a correct diagnosis should be welcomed.

The roentgenological examination offers such tangible help and is dissociated with any risk or hazard to the patient. Albers-Schoenberg, Holzknecht, Hurst, Beclere, Jordon, Groedel, Riedel and other European roentgenologists did some early work on this subject; however, considerable credit must be given some of our American collaborators, notably Cole, Case, Quimby and George for appreciating the possibilities of this method of examination.

There are two methods of visualizing the appendix; one is by injecting an opaque enema, the other by the ingestion of an opaque meal. The second is preferable because of the greater frequency with which the appendix can be demonstrated. This would demonstrate that antiperistalsis in the cecum and ascending colon were the prime factors in filling the appendix, rather than gravitation. In examining the patient the fluoroscopic method is the most satisfactory. This should be done in the vertical and horizontal positions. Occasionally the Trendelenburg position is necessary to release a pelvic cecum which might be incarcerated or possibly adherent.

By proper manipulation an otherwise hidden appendix can be shown; also movability and relationship to the surrounding structures noted. The plate method should also be used, for it occasionally gives additional information. Sometimes stereoscopic plates are indicated whereby one can trace a retrocecal appendix or an appendix in close proximity to the cecum or ileum.

It is necessary that the lumen of the appendix be patent. The appendix may not be demonstrated if its lumen is obliterated or if adhesions or kinks are present near the proximal end; or if an acute attack exists, the infiltrated mucous membrane prevents the entrance of the opaque substance. An enterolith or previously contained food matter may prevent its filling.

The time of examination is important, for the

appendix commences to fill shortly after the cecum. This is usually after the sixth hour, although some cases fill earlier.

Pathologic evidences of previous appendiceal inflammations are peritoneal adhesions, obliterations of whole or portions of its lumen, strictures of the lumen with more or less dilatation distal to it, and lastly the presence of hard concretions which are retained by strictures or produce the same effects as strictures.

As a result of his work with the x-ray in appendicitis, the writer has reached the following conclusions:

1. Because the appendix may have a physiological function it should be studied roentgenologically before removal in suspected chronic cases.

2. Because it possesses peristalsis, the roentgen demonstration of appendical retention or rapid expulsion of barium is of diagnostic value.

3. Because of its reflex influence over the alimentary tract, the appendix should be investigated by the barium method in many diseases of the stomach and intestines.

4. Because of its anatomical relation to the cecum, the location of the appendix can be determined approximately even when not visible on plate or screen.

5. When barium-filled, the appendix can be studied by the screen in great detail and accurately palpated for pressure-pain and adhesions.

DISCUSSION

Dr. Herbert Gray said that in the group of chronic appendicitis cases are those that fill and those that do not fill. Clinically he has never been able to see any relation between the two types. In the acute cases it is relatively rare that one has an opportunity to make an x-ray examination. The five symptoms of acute appendicitis, as emphasized by Murphy, are pain, nausea and vomiting, temperature, muscular rigidity and leucocytosis. Dr. Hubeny showed one excellent slide demonstrating the delay in emptying at six hours, which is so characteristic of subacute appendicitis. He cited two cases in which the appendix was not taken into consideration in making the diagnosis, but at operation it proved to be the cause of the trouble.

Dr. M. J. Hubeny, in closing, said that the reasons for the appendix not filling are chiefly mechanical, either constrictions, inflammatory processes, obliteration of the lumen or previously contained food matter. As a general rule, the appendix which is not capable of being filled is more pathologic than the one that is capable of being visualized. Usually the normal appendix can be visualized if one waits long enough.

THE LIMITATIONS OF LOCAL ANESTHESIA.*

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CHICAGO

The idea of performing painless operations on a conscious patient is probably as old as any other modern development. Yet the recent widespread use of local anesthesia is based on the discovery of the anesthetic properties of cocaine, well known to Indian healers—its isolation from Coca leaves and its first use in eye surgery by Koller in 1884. This date is the beginning of a rapid development, mainly in two directions. First the technic of local anesthesia is evolved, step by step. Careful anatomical studies reveal exact landmarks for approaching nerve trunks. Methods of infiltration, peripheral and central nerve blocks are described. Although some modifications may still be developed, practically all regions of the body have been explored this way. The development in the other direction has not been so rapid and is by no means completed. The pharmacology of the injected drugs lagged far behind the technical advance. Yet there are important steps to be noted here. Cocaine, except for surface anesthesia, has been substituted by the much less toxic novocaine. Small amounts of adrenaline have been added to slow down the rapid absorption of novocaine and thereby prolong the duration of anesthesia. Substitutes of novocaine appear daily on the market.

The object of further development would be to find a less toxic and more active anesthetic, that would alleviate postoperative pain for at least the first hours after operation without causing any tissue irritation. Suggestive experiments have been made along this line.¹

Twenty years have elapsed since the pioneer work of Heinrich Braun on local anesthesia appeared. It is instructive to watch the extent of these methods in various surgical institutions. At the University of Heidelberg the percentage of major operations performed under local anesthesia rose from 11.4 per cent in 1906 to 54.2 per cent in 1911. H. Braun's clinic in Zwickau shows a rise from 24.8 per cent in 1908 to 50.5 per cent in 1913. The highest percentage

of local anesthetics was published in 1914 from the First Surgical clinic of Budapest with 95.11 per cent. Ten years later in 1924 the curve of this same institution dropped to 64 per cent.

It seems timely now, after the years of laborious experimentation and initial enthusiasm, to attempt an outline of indications and contraindications. In a rapidly rolling moving picture, like the history of local anesthesia, this can only be a snapshot. Future developments may blur the picture tomorrow. While not so long ago local anesthesia was regarded as a poor substitute, an *ultima ratio* in cases when general anesthesia did not seem permissible, today the indication seems to be the reverse. General anesthesia is given if local anesthesia is not feasible.

What are then the contraindications to local anesthesia? First of all the psychic state of the patient must be mentioned. Children under fourteen are rarely good subjects. Nervous, irritable or mentally disabled persons will not react well to local anesthesia. Nevertheless much can be done here on the part of the surgeon. If the patient's confidence can be gained in the beginning by a few words of reassurance but chiefly by not causing any pain during injections, even so-called nervous patients are surprisingly good subjects, provided that the anesthesia is really good. However, there are unsuitable patients now and then, and here unless general anesthesia is contraindicated, local should not be forced. A good premedication will give the patient a good night's rest and relieve him from the fear and excitement before operation.

That *inflamed tissue* should never be injected locally is well known. There is no objection, however, to performing a distant nerve block for local inflammatory conditions. *Generalized infection* is a definite contraindication. The bacteria circulating in the blood stream may accumulate at the site of injection. This is especially true of spinal anesthesia.

Finally there are certain operations when, although a perfect anesthesia can be obtained, the method itself is so complicated, so unsafe or the quantity of the used solution is so large, that further improvements are necessary before universal use can be advocated. This is true for example in radical amputations of the breast.

As to abdominal operations, in my limited experience the following procedure has proved to

*Read before the Evanston Branch of the Chicago Medical Society, May 28, 1926.

1. de Takats Prolongation of local anaesthesia, Surg. Gyn. and Obs., July, 1926, pp. 100-105.

be most successful. If the operation is short the patient, young or adult, and especially if general abdominal exploration is planned, general anesthesia is the method of choice. This can be combined to a great advantage with an abdominal wall block, which if done well not only anesthetizes the incision but relaxes the abdominal wall. About five-sixths to nine-tenths of the general anesthetic is saved this way. A light gas or ethylene anesthesia is sufficient for the intra-abdominal manipulations and the relaxation is obtained by local anesthesia. In well localized circumscribed lesions if the patient is above fifty or otherwise handicapped and the operation is going to be a long one, splanchnic anesthesia gives better end results. The infiltration of the prevertebral tissue in the height of the first lumbar vertebra performed through the open abdomen (Braun) has several advantages over the posterior route. Gastrectomy for penetrating ulcer or carcinoma, common duct stone in a deeply jaundiced patient are the most frequent indications.

Another questionable point is the anesthesia of the lower extremity. Spinal anesthesia, if done at all, should be limited to this region and not attempted above the umbilicus. The two great disadvantages of spinal anesthesia are the excessive headaches and the large percentage of failures. The use of very fine needles instead of large trocars and the administration of intravenous saline or pituitrin greatly reduce the number of headaches. The failures cannot be overcome even with the most careful technic and constitute a serious disadvantage. In patients above forty, especially if marked organic lesions are present, spinal anesthesia still maintains its place and ought not be entirely discarded. The absence of shock in handling nerve trunks, such as amputation of the femur, or sciatic suture is very remarkable in spinal anesthesia. Otherwise local field blocks or light general anesthesia, not requiring deep relaxation, are equally satisfactory.

With the exceptions stated above, local anesthesia is the method of choice in operations on the head, neck, chest, upper extremity and lower pelvic organs. Brain operations are done with remarkable ease under local, but unconscious and restless patients should be excluded. The block of the trigeminal branches is a safe and sure procedure. Thyroidectomies, removal

of cervical lymph nodes are perfectly anesthetized without the necessity of deep paravertebral injections. The segmentary innervation of the thorax makes chest operations a favorable field for intercostal anesthesia. Paravertebral injections are not without danger because of the proximity of pleura and spinal canal. They can be perfectly substituted by intercostal block or if the block of rami communicantes is necessary, by splanchnic anesthesia. The upper extremity is safely blocked at the brachial plexus and also further peripherally around the wrist or at the base of the fingers. Sacral, transsacral or parasacral blocks will take care of the floor of the pelvis, bladder, prostate, perineum and rectum.

The advantages of local anesthesia over general are several. First the *diminution of post operative pulmonary complications* has to be mentioned. Bronchitis, pneumonia are also seen after local anesthesia, especially those of embolic nature. However, the irritation of bronchial mucous membranes, the paralysis of the nonstriated bronchial muscles and of the ciliated epithelium, furthermore the aspiration of mucus and blood especially in operations in the mouth and nasopharynx, all constitute serious factors in producing postoperative pulmonary complications. The large number of pulmonary abscesses after tonsillectomy is a sad proof of this statement. A further advantage of local anesthesia especially if it can be prolonged at least for a day after the operation is the possibility of ventilating the lung with forceful respiratory movements. The postoperative pain after upper abdominal operations practically immobilizes both diaphragm and abdominal muscles.

Another advantage is the absence of *functional impairment of heart, liver and kidneys*. The permissible amount of novocain which changes with concentration and site of application, combined with three to four drops of adrenaline 1:1000 to the ounce, causes no anatomical or functional change in any organ. Contrary to the general belief, small amounts of adrenaline can be safely used in hyperthyroid cases. The weak concentration of adrenaline does not influence blood pressure and metabolic rate even in most toxic cases and the disadvantage of pure novocaine is greater than the danger of using these minimal amounts. The objection,

that local infiltration will delay wound repair, cannot be substantiated; besides the tendency is to get away from the line of incision by nerve blocks or circumscribing field blocks.

The diminution of postoperative intestinal and bladder paralysis. Of course these conditions can be caused by the surgical procedure itself but the influence of general anesthetics is marked. An important advantage is the possible co-operation of the patient during operation. The patient's voice can be tested during thyroidectomy, a more exact hemostasis can be made if the patient is asked to cough and strain before closure of the wound. A more extensive use of local anesthesia will also lessen the number of hospitalized patients, increase the number of operations in dispensaries and facilitate teaching.

From a general viewpoint, local anesthesia has done a great deal to establish a more exact knowledge of pain in various organs. This is especially true of recent investigations on visceral pain. Furthermore it has influenced surgical technic. Good exposure, gentle handling of tissues and sharp dissection are essential if local anesthesia is to be successful. Buttonhole incisions with a lot of pulling or dragging will annihilate the effect of the most perfect local anesthesia, as the pulling is transmitted to nonanesthetized areas.

If we now consider the disadvantages of local anesthesia, here are a few frequently made objections:

1. *Loss of time.* This really should not be considered, if the patients are really benefited by the local method. Besides this disadvantage is easily overcome by certain organizatory measures.

2. *Large percentage of failures* in certain types of nerve blocking. After eliminating all technical mistakes there still is a certain percentage of failures in blocks like that of the brachial plexus, sacral and spinal anesthesia (six to nine per cent). If after a waiting period of fifteen to twenty minutes the anesthesia is a failure or only partially effective, time has really been lost. This element will probably never be quite eliminated from local anesthesia, although further improvement is possible.

3. *The dangers of local anesthesia* are entirely due to technical errors or lack of judg-

ment, because methods, that are dangerous *per se*, should be discarded. High sacral, high spinal, intra-arterial anesthesia in their present form should not be permitted. Paravertebral should only be used for certain restricted, one-sided lesions. Intraspinal or intravenous injections can be avoided by simple precautions. Signs of toxicity can be avoided by never transgressing the limit of 250 cc of a half per cent, 100 cc of a one per cent, and 40 cc of a two per cent solution. Besides it should be borne in mind that these doses have to be reduced in certain regions of the body like the paravertebral spaces, the epidural and spinal canal, where absorption and vicinity of the central nervous system require further reduction.

The relationship between local and general anesthesia is not that of rivalry. The latter has made great strides recently, eliminated chloroform entirely, reduced ether to small amounts by use of nitrous oxide and ethylene. Both local and general have their advantages in certain types of patients and certain regions of the body. They can also be combined to great advantage especially in abdominal surgery. However there is one great difference between the administration of the two methods. The general anesthetist, whether a specialist or a well trained nurse, is entirely separated from the operation itself. The less he is interested in the procedure, the more attention will be given to the narcosis. Local anesthesia should be given by the surgeon himself or his first assistant. It is a part of his technic, it should be part of his surgical training. It should be taught in the medical school in anatomy, in dispensary clinics and chiefly during postgraduate work. There is no need then to make a specialty out of local anesthesia. Various surgical specialties can quickly adopt simple methods belonging to their particular field. These methods should be studied, judiciously used, their growing importance recognized but not overestimated.

310 South Michigan Avenue.

AS VIEWED BY THE WISE OLD OWL

Two maids by the river were kneeling,
To disrobe for the swim they were stealing.

Said the owl in the tree,

"How'd you like to be me?"

When the belles of the village are pealing.

—Circulating.

SOME FUNDAMENTALS AND END RESULTS OF X-RAY TREATMENT*

EDWARD L. JENKINSON, M. D.,

CHICAGO

Since the advent of the high voltage x-ray machine much stimulus has been given to the field of roentgen therapy. Whether it has been to the advantage or disadvantage of the patient suffering from carcinoma cannot be stated at present. Preposterous claims have been made by many unscrupulous men. Promises have been made to the incurables that would make the miracle man feel like a counterfeit.

To the biological and pharmaceutical houses must go a great deal of credit for the rapid strides during the last decade in x-ray work. The same holds good in the field of electrotherapeutics. Giving a doctor an x-ray machine of high power does not make a radiologist of him any more than giving him a knife makes him a surgeon. Some of the manufacturers have sold doctors machines and furnished technicians and physicists to teach them how to treat their various patients. No physicist is competent to go from one doctor to another and teach him in a few weeks how to treat malignant diseases. Second, in the x-ray field the lay therapist presents a problem. He is the technician who is able to get together a few thousand dollars and purchase an x-ray machine. In his ignorance he treats all cases and promises anything they desire. Who is to blame for this condition? First, the manufacturer for selling him the machine and, secondly, the doctor for sending him patients to treat.

There are certain cases in which much benefit can be obtained by the judicious use of the x-rays. Many patients suffering from severe pain can be temporarily relieved. Tumors of the lymphomatous group are often made to entirely disappear, but to claim, in an unqualified manner, that deep-seated malignancies can be cured is to bring the x-ray profession into disrepute.

The passage of rays into the body cause certain biological changes. The amount of changes depend upon how much of the beam is absorbed. The passage of the rays through the body causes practically no change, therefore, the therapeutic value of the x-rays depends upon the absorption

of the rays and not on the amount that passes through. There are certain tissues in the body that are hypersensitive to the x-rays and also some that are very resistant. To the former class belong the cells of the genital organs and embryological tissues. To the latter belong the connective tissues, bone, etc.

While subjecting an individual to roentgen therapy it is advisable to direct the rays at the area of pathology. To believe that radiation attacks only the pathological cells leaving the normal intact is erroneous. During any treatment there are always changes in the normal. This point can be thoroughly demonstrated by frequent blood counts. In many instances marked cachexia follows a series of x-ray therapy.

In the treatment of diseases by means of the roentgen rays, for the sake of convenience, the therapy may be divided into three classes: Low voltage used in superficial lesions; moderate voltage used in lesions two or three inches under the skin; and high voltage in all deep lesions.

In determining what voltage to use it is always well to know approximately the depth of the lesion. Other important factors which influence the quality of rays are filters and distance. By means of filters the amount and quality of rays delivered into the body can be varied. At present aluminum and copper are the metals most frequently used as filters. Aluminum has a large absorbing power for the hard rays and allows the soft and medium to pass through. Copper, on the other hand, absorbs most of the soft and medium rays and allows the hard or Gamma rays to pass through. Considering these facts it is essential that the radiologist be familiar with filtration.

The amount of rays absorbed in the body can be determined by the ionization method. The ionization chamber can be placed in a water bath or in a piece of beef. In this way the amount of rays absorbed by each inch of tissue can be determined.

The chronic leukemias can in most cases be benefited by x-ray therapy. During treatments bloods counts should be made daily. No further treatment should be given while the white count is still decreasing. At the first rise in the white count the treatment should be repeated.

In the exophthalmic goiter the word cure can be truthfully used in many cases. In reviewing some 500 cases treated in St. Luke's Hospital by

*Address before North Shore Branch of the Chicago Society, November, 1925.

means of x-rays 80 per cent. were considered cured. The colloid, cystic and simple adenoma should not be treated by means of the x-rays.

In reviewing their files, comprising about 1,000 cases of malignant disease of the deeper structures, it was found that most of the patients were dead after two years. It is his belief that no deep-seated malignancy is cured. The roentgen ray is only a temporary expedient in the majority of cases, but at the present time is the best method available as it relieves the pain and in some instances prolongs life.

DISCUSSION

Dr. R. B. Preble said that the conditions which come to the medical man that are amenable to x-ray treatment are not numerous. After years of observation he is satisfied that cases of hyperthyroidism do better under x-ray treatment and rest than with surgery. Occasionally he has seen cases that were made worse by x-ray treatment.

The acute lymphatic leukemias if they are influenced at all by x-ray treatment, it is injuriously. Occasionally the splenic myelogenous leukemias are influenced by the x-ray.

As to the use of x-ray in whooping cough, he is not much impressed with the reports.

Dr. A. E. Halstead said his experience with the x-ray was confined to deep tumors, superficial tumors, which the dermatologists call epitheliomas, and the keloid growths of which so little is known. He cited a case of carcinoma of the ovary in which complete removal of the growth was made and a series of x-ray treatments given by Dr. Case. In six months the patient returned with a little tumor in the scar in the midline. This was removed and proved to be an implantation tumor.

He believed that x-ray should be used in all cases of diffuse hyperplasias with hyperthyroidism. Most cases of exophthalmic goiter are best treated by the x-ray.

Dr. H. M. Hedge spoke of the value of x-ray in dermatological diseases. In acne the results are most satisfactory. A course of eight to ten very light treatments over weekly intervals will cure the most stubborn case. It does not cure toxic dermatitis unless the focus of toxicity is removed. Senile freckles that come on between the ages of 50 and 60 practically melt off under x-ray treatment.

Dr. M. J. Hubeny said Dr. Jenkinson was quite right in stating that the manufacturers probably encourage many unqualified men to take up x-ray work.

In his opinion the treatment of the tonsils by x-ray has been over-estimated. The usefulness of this method is limited and unless there are strong contraindications to removal, all tonsils should be treated surgically.

Good results are obtained in the treatment of uterine fibroids and certain types of metropathies.

Dr. Herbert Gray spoke of the good results obtained in the essential uterine menorrhagias occurring at or near the menopause. He cited the case of a girl of 18, who suffered from chronic menorrhagia with no evidence of fibroids. She was absolutely cured by the x-ray.

Dr. A. C. Garvy cited a case of Hodgkin's disease in which the mediastinal glands were involved in which very violent x-ray treatment resulted in increased dyspnea, the presence of fluid in both pleural cavities and a generalized cachexia. In other cases of different character treated with smaller doses the results have been most gratifying.

Dr. G. W. Green said that the paper of Dr. Jenkinson was the best one he had heard on the subject in quite some time. He asked Dr. Jenkinson what is the cause of death in those patients who die from x-ray treatment. He also asked what dosage was used in malignant cases.

In goiter cases his best results have been obtained from surgery and not from x-ray treatment.

Dr. J. K. Narat agreed with Dr. Jenkinson that the manufacturer was to blame for putting high voltage x-ray machines in the hands of unqualified men.

He had considerable experience in Heidelberg in the treatment of malignant diseases of the uterus and the German statistics show that the results obtained fourteen or fifteen years ago were just as good as those obtained today with the high voltage machines.

The experiments on exposing foods to the x-ray are very interesting. In Vienna they are now conducting experiments with carbohydrate foods. After exposure to the x-ray these foods are fed to rabbits and by means of control animals the rate of growth is studied.

Dr. Edward L. Jenkinson, in closing, said that he did not think acute leukemias should be treated by the x-ray.

In answer to Dr. Green, most of these patients die from anemia probably due to the toxins which are given off. The voltage used depends on the depth of the lesion. Most of the cases of cancer of the breast can be treated with 125,000 to 150,000 volts.

Regarding thyroid, it can be safely stated that 80 per cent. are cured by x-ray treatment. Many surgeons claim that pre-operative x-ray treatment of thyroid cases make them difficult to operate. On investigation, this has not been found true.

THEN THE FIGHT BEGAN

Street Orator—Ah, gents, if we all 'ad our rights I should be ridin' in me own carriage now, as I 'ave done before.

Skeptic—Yeah, but yer poor old mother couldn't push you now.—*The Humorist* (London).

THE PASSING SHEIK

Milliner (eager to sell hat)—"Oh, madame, so chic!"

Mrs. Noorich—"Sheik, huh? Take it away. I don't want none of last year's stuff."

—*American Legion Weekly*.

THE POSSIBILITIES OF A RATIONAL MILK THERAPY IN TUBERCULOSIS

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Before approaching the problem under discussion, it is necessary to mention very briefly some of the scientific and practical knowledge about milk, which is scattered in different branches of science: First, beginning with religious legends, and later ending with physiological and technical chemistry, which have a somewhat scientific foundation.

Milk, assigned by nature itself for the nutrition of the organism at the period of its greatest growth, contains all the nutritive elements for that purpose, namely: Proteins, carbohydrates, fats, mineral salts and water.

The Proteins are composed mainly of caseinogen in the amount of approximately 3 per cent. Caseinogen is a complex protein containing phosphorus, and belonging to the nucleoalbumin group. The introduction of phosphorus in the protein molecule is the essential factor of transforming the protein into a stage of living protoplasm. Only the nucleo-protein is a living organized albumin. Without the introduction of the phosphorus group, protein remains a rather passive material; thus proving that caseinogen in its chemical structure is an important plastic factor in the process of building living matter, and is therefore invaluable in the nutrition of the tuberculous patient where we are constantly aiming to stimulate the formation of scar tissue.

Caseinogen differs from the other albumins in respect to gastric digestion. While all the proteins are subjected to the action of pepsin only, the caseinogen is acted upon by two ferments: First, by chymosin ferment, and later by pepsin. Under the influence on the chymosin ferment, caseinogen expands into a mass which envelops the whole gastric content until it is subjected to the peptic digestion. Due to this, the digestion of the rest of the food is delayed. This was proved by the following observations: 1. If a cube of meat is put into dog's gastric juice (taken in the laboratory of Prof. E. Pavlov) and then milk is added, the digestion of the meat is delayed until the moment when the coagulated milk begins to break up under the pepsin. 2. If on the contrary, milk is placed first, and 15 or

20 minutes later the meat is added, during which time the milk has had a chance to coagulate, the peptic digestion of the meat and milk occur simultaneously, i. e., digestion is much faster.

The above experiments were undertaken in order to verify the following dietetic law of the Jewish people: "If one eats meat, then milk should be taken only within six hours, but if milk is taken first, then meat can be taken within 15 or 20 minutes." One wonders how in so early a time religious thought has foretold such an important physiological fact, bearing on nutrition in general, and on the dietetic management of tuberculosis.

While managing a Kumiss sanitarium (Kumiss is a fermented milk beverage to be discussed later), we observed that when patients drank Kumiss after eating meat, they complained of bloating for several hours; and therefore in the afternoon, they could not take any more Kumiss. Where patients drank large quantities of Kumiss before a meat dinner, or on a meatless diet, no such symptoms occurred. This is reasonable, for as we said before, caseinogen undergoes action of two ferments—chymosin, which anhydrates the albumin (Danilewski), and pepsin which does the opposite, hydrolizes it. That is why caseinogen must enter the stomach at a certain time to undergo first the chymosin action in order to join the rest of the albumins for the further peptic digestion. We found it necessary to discuss in detail the biology of caseinogen because of its unusual properties that influence the amount of the intake of milk in relation to the time of intake of the other albuminous substances. A healthy person drinking a small amount of milk or cream after a meat meal, may not suffer any harmful result, but in the case of patients where treatment (as shown later) depends largely upon milk, these principles should be followed strictly.

Next our attention should be drawn to another kind of albumin which was isolated from milk by Prof. Danilewski in about 1890. Prof. Danilewski suggested to me as a subject for my thesis "Protein Calcium and its Biologic Properties." According to my researches, the milk contains 0.35 per cent of protein calcium and the same figures were found by Prof. Slovitzov. About half of this is calcium of unusual composition, for it gives a weak Millon reaction. It dissolves in acids and breaks up in alkalies after

standing or immediately upon heating. Boiling and even pasteurization decomposes it into albuminous and inorganic parts.

Experiments which took several years' time, were performed on 70 puppies. Results were as follows: 1. The removal of protein calcium from the milk slackened the growth of the animals, later changed their natural forms, and finally the animals died. 2. Protein calcium possesses a great ability to deposit a large quantity of lime in the organism while the other compounds of lime are absorbed and assimilated very slowly. 3. By giving protein calcium to puppies, that were first deprived of it, they soon began to grow and almost reached the size of the controls, although some degenerations of their forms remained. 4. The decomposition of protein calcium into albuminous and inorganic parts diminishes greatly its plastic properties. After completing these experiments, and familiarizing ourselves with all the literature on that subject, we realized that we faced the problem of treating tuberculosis which will be discussed in a chapter of medicinal milk beverages.

The rest of the milk proteids, such as albumin and globulin, that transudate from the blood serum into the milk, are present in small quantities, and are not remarkable in any respect. The same could be said about the carbohydrates, which in this particular problem have no interest for us.

Milk Fats. The fat of the milk is composed of various size globules, from 2 to 5 microns, and are covered with an albuminous membrane. The difference in the size of these globules has a great bearing upon the quality of the milk. While the small globules have a fine albuminous membrane, and are easily emulsified, the large fatty globules are covered with a thick membrane, and the emulsification is more difficult. The large globular milk after standing, rapidly forms an apparently thick layer of cream, and is considered by the housekeeper as rich milk, whereas the analysis discloses a small amount of fat. The explanation of that apparently thick layer of cream is the large spaces between the large globules. The difference in the quantity of the milk fat depends upon the breed of the cattle, and their fodder. In some disturbances of the milk secretion, the albuminous membrane of the fatty globules becomes very thick and under the microscope has an appearance of half moons. It

may be of interest to mention at this point that for staining the globules, Kohn suggested to mix in a capillary tube, a drop of milk with saturated methylene blue, and allow the formed elements to settle.

It is evident that only small globular milk should be used in the feeding of tubercular patients, as it is easily emulsified and assimilated and can be consumed in larger quantities with the smallest loss of digestive energy. To control the supply of milk, not only chemical analysis is necessary, but also microscopical. It is therefore only after both chemical and microscopical examination of milk that one can judge whether a given milk is the proper one for a tuberculous patient.

The salts of the milk are various, and are composed of almost all the elements necessary for the growing organism. The composition of cows' and mares' milk is given in the following table:

	Mare	Cow
K ₂ O	1.045	1.697
Na ₂ O	0.139	1.766
CaO	1.236	1.599
MgO	0.125	0.500
P ₂ O ₅	1.309	1.974
Cl=Cl	0.308	1.110
F ₂ O ₃ =F ₂ O ₃	0.015	0.004

It is evident from this table, that the salts of magnesium and calcium which are abundant in milk are important for the development of bones and the formation of tissues in the fast growing organism. These salts are important in the impregnation of the cicatrized lesions, and a similarity exists between the physiological demands in the growing child, and the tuberculous organism. Part of the earthy metals are combined with the albumin, part with the caseinogen. The rest of the salts are partly dissolved and partly suspended. Very little is known about these salts concerning their relation to the treatment of tuberculosis or to their biological significance in general. Aside from these constituents, there is a small amount of organic components, that belong to the extractives, and organic ferments that are products of degeneration glandular epithelium and leucocytes during milk secretion. There is present a catalase-ferment that decomposes hydrogen peroxide; a proteolytic, that acts in a weakly alkaline medium and a glycolytic and fat breaking ferment.

Finally Prof. Danilewski and his pupil Umi-kov have demonstrated the presence in milk of a substance, the nature of which is still unknown. Ziber-Shumova of the Chemical Department of

the Institute of Experimental Medicine in Lenin-grad has attempted to show the relationship this substance has to the organs regulating the growth of the body. Thus we see that besides the dynamo-plastic components, milk possesses a group of biological elements which play a great rôle in the growth in children and healing in tuberculous patients, although some of these properties are destroyed by boiling and pasteurization. Poisonous substances, caused by infection in the cow's body, or taken through food can gain entrance into the milk. These facts should be considered in the study of the problem of milk from tuberculous cows. Pasteurization destroys the tubercle bacilli, but not their toxic products.

Milk As a Therapeutic Aid. In the middle of the last century, during the conquest of the Caucasus by the Russians, it was learned that the mountaineers prepared some sort of beverage from milk called Kephir, which they considered very nourishing. The manner of preparation of Kephir was withheld because of a belief that it was a gift from Mohammed, and, that as soon as the Russians found out how it was made, it would lose its miraculous qualities. Regardless of these difficulties, in 1867 Dr. Sipowski succeeded in learning the secret of the preparation. He reported to the Caucasus Medical Society the physiological and curative properties of Kephir. The beverage is a product of fermentation of cow's milk, caused by symbiosis of Caucasian lactic bacillus and saccharomyces, which breaks up sugar into lactic acid, alcohol, water, and carbon dioxide, and at the same time peptonizes the proteids. In 1869, Dr. Stalberg reported to the Petrograd Medical Society of a similar milk beverage under the name of Kumiss, that was well known among the inhabitants of the Volga River district. This ferments also under the same flora as Kephir, and gives the same end-products. The difference between them is that Kumiss is prepared from mare's milk, having a very small amount of solids (mare's milk 9.2%, cow's milk 12.8%). For this reason, Kumiss is more easily consumed in larger quantities than Kephir.

During the period 1870 and 1885, a number of articles were published about nutritive and therapeutic values of Kumiss and Kephir, but no one thought of applying this in the treatment of tuberculosis. In 1885, Professor Kosturin of

Petrograd, assistant Professor Pashutin (who was a victim of tuberculosis), went with a small laboratory equipment to the Volga Steppes for treatment with Kumiss; and within five months returned feeling perfectly well. He then wrote his thesis "The Treatment of Tuberculosis with Kumiss." About the same time in Berlin, was published a book by Professor Detweiler, under the title *Die Behandlung d. Lungenschwindsucht*, Berlin, 1884, in which the author emphasized the possibility of curing tuberculosis by means of the methods used in the sanitariums. For advocating these methods, Brehmer was at once condemned as a quack. After the publication of Prof. Detweiler's book, the Brehmer principle reigned victorious, and has since then been known as the Bremer-Detweiler method of treatment of tuberculosis.

After the disappointments in the discoveries of Debove and Koch, the sanitarium method became very popular in western Europe, especially in Germany, while in Russia, they used the Kumiss treatment by opening Kumiss sanitariums in the steppes. An Englishman, Dr. Karick, opened in the Orenburg region a large sanitarium for English people, using the Kumiss treatment. There these patients remained until fall, and then went to Egypt. There near Cairo, the same doctor established a sanitarium pursuing the above mentioned Russian method of treatment. The scientific interest in this method of treatment grew rapidly. In 1886, Dr. Stange, Prof. Eichwald's assistant, wrote a thesis on the cure of tuberculosis with Kumiss, which was included in Simpson's book of General Therapy. Omitting the numerous articles and monographs on this work, we should like to mention the work of Prof. Gelubiev, director of the Moscow Hospital Clinic, about the therapeutic properties of Kumiss. This work was published in 1890.

After making a thorough comparison between the treatment of Kumiss and sanitarium methods in western Europe, he drew the following conclusions: 1. In western European sanitariums the principal treatment is "Liegekuhr" (absolute rest in bed). 2. In eastern Europe (Russia) the principal treatment is with Kumiss. This is supplemented with slow walking in the fresh air, provided the patient does not show manifest symptoms. This moderate amount of walking in the fresh air was found necessary in order that the patient should be able to drink

large quantities of Kumiss. The increase in weight with the Kumiss treatment is more rapid than with the Liegekuhr. Thus we see that two opposite methods—rest and motion in the treatment of tuberculosis, brought good results. The one with the Kumiss was the more encouraging. The beneficial results in tuberculosis patients treated in the Kumiss sanatoria could not be attributed to the rest or motion, but depended largely on the usage of Kumiss or kephir, although the exact composition of kephir-kumiss was not known at that time.

At the moment of this indefinite situation came the result of our researches: the isolation of protein calcium with its ability to promote deposits of magnesium and calcium. Daily autopsies demonstrate traces of healed tuberculosis unnoticed during life, and all such cases show deposits of calcium, which proves that it plays a great role in the healing process of infected foci. The history of this question (impregnation with protein-calcium) is extremely important. I shall refer to only two remarkable cases. Prof. Botkin, the celebrated physiologist and clinician, made numerous scientific investigations on tuberculosis. In the lectures of Prof. Botkin (1875) there is a statement made that there is a marked racial difference to tuberculosis. The Jews show a greater resistance to tuberculosis than any of the other people. He further states that tuberculosis is preceded by another disease that manifests itself by a great loss of calcium and magnesium, and therefore, in the treatment of tuberculosis, calcium should have a prominent place. This view still holds good now and was supported by Prof. Nothnagel, a Vienna clinician. He claimed that the demineralization that accompanies tuberculosis is not less serious than the latter, for it is hard to deal with. During his professional career, he prescribed to all tuberculosis patients preparations of calcium. In 1875 Prof. Sergei Botkin, the teacher of the celebrated physiologist Pavlov, treated the Empress Alexandra Feodorovna, the wife of Czar Alexander II, who was a victim of tuberculosis. This was the reason for Prof. Botkin spending all his years in the study of tuberculosis.

We decided to study the action of protein calcium in tuberculosis and at first experimenting on animals. But here we encountered two obstacles; first, the complicated technique of the

isolation of protein calcium and its instability, for it decomposes in alkaline medium during long filtration; and second, the difficulty to develop various phases of human tuberculosis in small laboratory animals. In 1903 it was decided to transfer the work to the Pasteur Institute in Paris, where Prof. Metchnikoff promised Prof. Danilewsky to obtain for him materials and animals (monkeys). But the outbreak of the Japanese-Russian war interfered with our plans. After the war we resumed our work, but for some reason it was interrupted. Then the world war and revolution, with all its consequences, seemingly buried all our dreams of a continuation of our research.

In 1923 there appeared an article by Dr. Arima of the Pathological Institute of Osaka University in Japan (No. 32 *Zeitschrift fur Tuberculose*) in which he claims that introduction of tubercle bacilli under the mucosa of tonsils of rabbits causes a typical course of human pulmonary tuberculosis. We then decided to resume our work under the direction of Prof. N. Kaltzoff, Prof. A. Bach, Prof. Sbarsky and Prof. Korshun. The protein calcium was prepared in the Biochemistry Institute of Profs. Bach and Sbarsky and the animal experimentation was done in the Metchnikoff Institute in Moscow. Prof. Korshun, director of Metchnikoff's institute, expressed a desire to partake in these experiments and a commission was formed under his presidency. Twenty rabbits were inoculated Feb. 24, 1924, with tuberculosis culture obtained in Charkov and Berlin. The results were negative, and the experiments of Arima were not realized. Some of the rabbits died of disseminated tuberculosis, some did not develop tuberculosis at all, while others perished from other causes.

Then we decided to go abroad to finish our work. A record of our previous experiments was made, and a plea by the institute to help us to obtain our aim was added. In Chicago, upon consultation with Dr. Hassin and Dr. Petersen, it was decided, that as the material was not harmful, it could be applied to patients with incipient tuberculosis without previous experiments on animals, and, thanks to the administration of the Municipal Tuberculosis Sanitarium, we received an opportunity to start the preparation of material. With the modern equipment of the laboratory of the Chicago Municipal

Tuberculosis Sanitarium, we can obtain material in a few minutes, where previously it took us two days. With this material, we are to proceed with experimenting on patients, hoping that we meet with favorable results.

The tubercle bacilli are very resistant, due to their waxy membrane, which withstands the action of alkalies (method of Biddert). However, everything adheres to wax, especially calcium, which seems to be destined by nature itself to impregnate the waxy capsule. This calcium impregnation of the waxy capsule incarcerates the tubercle bacilli, and thus inhibits their dangerous action. In other words, in this calcium-impregnation lies the salvation of tuberculous patients.

For the complete success of this treatment, it may be necessary to use some adjuvant measure, such a purification of the intestinal tract in accordance with Metchnikoff's method. In this respect, Kephir is the ideal nutritive product. It destroys the wild intestinal flora and prevents putrefaction, helping thus the process of absorption of the mineral salts. It seems evident that we are on the right path to the goal.

CONCLUSION

The history of the treatment of tuberculosis represents an important chapter of the history of medicine in general. In it are reflected all the great aspirations, the enthusiasm, as well as the disappointments, and even unfortunate disasters. I am a living witness of the beginning of the epoch of curability of tuberculosis. All my professional life, I have been an active participator in the fight with tuberculosis, and now at the end of the threescores of my life, I deem it my duty to tell that this epoch left me greatly disappointed.

I remember the first talks about the possibility of curing tuberculosis by forced nutrition (Dobow); I remember the shock created by the discoveries of Koch, and the disappointment that followed. I distinctly remember the great excitement and joy caused by Koch's tuberculin, but I can not forget how painful was the disappointment with this discovery, and how numerous were the victims of the new treatment.

At this time of great discoveries, the ideas of Brehmer and Detweiler of sanitarium and hygienic treatment of tuberculosis began to spread quietly with reports of greater success

than before. In Russia, in addition to the sanitarium treatment was added the Kumiss treatment with a very great percentage of cures; while the previous great discoveries did not cure a single case.

The middle of the 90s, when it was distinctly proved that 50 per cent of tuberculous patients can be cured by sanitarium and Kumiss methods of treatment, it became clear to many research workers, that what was necessary was to study that biological complex of factors which gave 50 per cent cures in the sanitariums. In fact, the percentage was even larger, as every late and hopeless case of tuberculosis that enters the sanitarium only helps to obscure the true statistics of the improved cases. Thirty years ago it was pointed out in an article on the therapy of cholera and infectious diseases that the percentage of cures was considerably greater than that given in the statistics of sanatoria and hospitals. All depends on how early did the treatment begin. The same is true of tuberculosis. We must get hold of a tuberculous patient as early as possible. Then the success of the treatment will be considerably greater. Maybe we shall then be able to reach a 100 per cent of cures. Even Koch in his time admitted *that it is necessary to give up the idea of annihilating the tubercle bacilli, but to create in the organism conditions difficult for their growth.*

But Ehrlich's laurels and the ideas of tuberculinism do not let rest some of the ardent believers in chemotherapy or tuberculinotherapy. Up to date, books and monographs on the subject indicate that tuberculin enthusiasts and the chemotherapeutists, notwithstanding the 45 years of fruitless efforts, are working on the same principle, that is, to kill the tubercle bacilli within our tissues, forgetting that the waxy capsule of the tubercle bacilli is not dissolved even by concentrated alkaline solutions (Biddert). Usually, in the first steps of such methods, injury is shown on the organism. Then recourse is made to small doses, which in the long run have a cumulative effect on the organism, so that the injury to the body is not avoided. Finally, such treatment falls in disrepute, thus adding another failure to the long list of previous fruitless efforts in the field of treatment of tuberculosis.

The new developments in the research work

on the treatment of tuberculosis should be in the direction of understanding the complex biological factors, which have been the agents in curing 50 per cent of the sanitarium patients. Our first attention in this respect must be given to milk.

Methods about the curative effects of milk, Kephir, and Kumiss are found in the most ancient times in connection with religious myths and beautiful traditions. Herodotus alludes to the curative effects of a milk-drink, Keffir. In the 18th century, on a small island near France, was a herd of cows, whose milk had an almond odor. A tradition arose that the milk from these cows cures tuberculosis. Sick people from all over France came over there for milk treatment. The French government put a high tax on the export of this milk, and, wishing to keep this profitable monopoly, prohibited under death penalty the export of calves. The faith in the curative effect of this milk was so great and so widespread that notwithstanding the death penalty for the export of calves, a Russian magnate, Count Sheremetieff, succeeded in obtaining a bullock and calf for 200,000 rubles for developing a similar herd in his Russian estate for the purpose of curing with the milk his tuberculous wife. We see thus that in different parts of the globe; in central Asia, Caucasus, the Balkans, in France, countries of different geographical positions, national beliefs, as well as aspirations, legends and traditions were formed as to the curability of tuberculosis by milk and milk drinks.

In previous pages we have shown which are the curative elements of milk, namely, the protein-calcium with the property of impregnating the tubercle bacilli and the tubercular foci. When this fact will be established, then the protein-calcium can be obtained from substances other than milk. Until then, milk, Kephir and Kumiss must be the mainstay in the treatment of tuberculosis.

In obtaining this from milk we found that not all samples of milk gave the same amount. This fact evidently depends on the food the cows were getting. This leads us to think that with a properly selected food for cows, we can obtain larger quantities of the product, just as with a proper chicken feed we can increase the amount of lecithin in the yolk of the egg.

From the foregoing the reader may visualize

the path on which mankind was moving in fighting the terrible white plague. This path is the "milky way." The discoveries in bacteriology and immunology have temporarily turned the research workers away from this path; and what are the results? Nil! To my mind, it would be more rational at the present time to turn our attention to the study of the biological properties and the curative effects of the individual components of milk, Kephir and Kumiss, which have gained a certain reputation in the sanitarium of physicians in the fight with tuberculosis.

The sanatoria should have their own herds of milk cows. The cows should be selected after a microscopical and chemical examination of the milk of each cow in accordance with the statements previously made in discussing the component elements of milk. This would be a better plan than to feed tuberculous patients with milk obtained on the market or milk that is pasteurized and possibly came from tuberculous cows, i. e., milk, which under the best conditions may contain a large amount of toxic materials.

It is also advisable that the sanatoria should manufacture their own Kephir and the research laboratories connected with the sanatoria should by the aid of the modern methods of examining the urine, blood and feces, investigate the influence of Kephir on the general metabolism of the tuberculous patients. A small experiment with Kephir made by us in the sanitarium on patients assisting in the laboratory work, has distinctly proved that: 1. The patients like the Kephir. 2. Some were markedly improved. 3. Some gained in weight and 4, others overcame habitual constipation. The main feature is the first: the patients like it, which is a very important therapeutic point.

The United States is rich in regions where the climatic conditions are very favorable for tuberculosis patients. There the Kephir therapy should be introduced as a routine in the sanitarium treatment. Research laboratories for the study of Kephir, as above mentioned, should be a part of the sanitarium equipment.

This is one way, I think, that will lead us to a brighter outlook on the future of the treatment of tuberculosis. This is my firm conviction, based upon thirty years of scientific and practical work in the fight against tuberculosis.

RELATION OF MALIGNANCY TO UNTREATED FIBROIDS OF THE UTERUS

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Within the last six months three very similar cases have come to our attention, all being women in whom fibroids of the uterus had been diagnosed years ago with a later development of carcinoma of the cervix.

The first patient, a woman now fifty-nine years of age, was seen six years ago. At that time she gave the history of having had the menopause at the age of forty-eight. At the age of fifty-two she again began to flow, this flow occurring at irregular intervals and in greater amounts than her normal menstrual period. She complained also of backache over the lower spine and sacrum.

Past history was negative.

Marital history—She had been married thirty years and had one child.

Family history was essentially negative.

The only pathology revealed on physical examination was the finding of a fair sized fibroid of the body of the uterus.

The patient absolutely refused operation and went on for six years treating herself medically. Up to this time her symptoms had remained the same and although somewhat anemic she had lost no weight. Then her symptoms became much exaggerated. A very foul vaginal discharge appeared. Upon examination at this time a diagnosis of medullary carcinoma was made. The case was too far advanced for surgery and she was referred to a radiologist.

The second patient, a woman now forty-two years of age, complained of symptoms typical of fibroids of the uterus. Her past history was essentially negative and although she had been married for twenty years had borne no children. Examination revealed an interstitial fibroid in the posterior wall of the uterus close to the cervix. The patient went on for four years before submitting to operation and then only because of an increasing metrorrhagia with its resulting anemia. On operation an interstitial fibroid was found in the posterior wall of the uterus. The uterus was quite firmly fixed in the culdesac and it was with great difficulty that the entire uterus together with a large portion of the cervix was

removed. On pathologic examination of the tissues after operation the fibroid was described together with a beginning cancerous growth in the cervical canal.

The third patient, a woman thirty-nine years of age, had been suffering from symptoms typical of fibroids of the uterus for the last two and a half years before consulting us. She had been married sixteen years and had borne two children. On bimanual examination a large tumor mass could be felt attached to the superior pole of the uterus, which was diagnosed as a fibroid. Six months later she was operated on and the diagnosis confirmed. There was much secondary degeneration in the tumor. Neighboring lymph glands were hard and easily palpable. The postoperative pathologic examination showed the presence of a carcinoma, which, of course, had metastasized to the neighboring glands.

Now it is well known that carcinomatous changes in a fibroid are quite rare, sarcomatous changes being the more common. Bland-Sutton, on the other hand, believes that cancer of the cervix occasionally arises in a uterus containing submucous fibroids. In 1906 he examined the records of 500 consecutive cases of hysterectomy for fibroid in his own practice and found eight instances of cancer, the finding being verified in each case by microscopic examination. When a woman known to have a fibroid attains the menopause and subsequently suffers irregular issues of blood, it is a sign that the fibroid has become septic or that a cancer has arisen in the corporeal endometrium or in the mucous membrane of the fallopian tube.

Piquand, in 1905, analyzed 1,000 cases of uterine fibroids and found cancer of the corporeal endometrium in fifteen. He called attention to the frequency with which submucous fibroid is associated with cancer of the corporeal endometrium, especially in women of fifty years and upwards. He further emphasized that a submucous fibroid is usually associated with changes in the endometrium which not only cause bleeding but leucorrhea, salpingitis, perisalpingitis and such changes in the epithelium as render it susceptible to cancer.

Kelly and Cullen in a study of over 1,000 uteri removed for myomas found eighteen cases of cervical carcinoma associated with the uterine myomas.

Lockyer in an analysis of 210 cases found car-

cinoma of the cervix in only two.

In a series of 188 specimens Blank found carcinoma of the cervical canal in two and of the cervix in two.

Direct malignant transformation of uterine myomas is infrequent. Naturally if malignant degeneration occurs it assumes the connective tissue type—sarcomatous. Myomas, of course, may become invaded by epithelium and therefore exhibit carcinomatous alteration.

Kerr and Ferguson state that carcinoma may extend secondarily into a fibroid by direct spread from a cancerous endometrium and that a uterus which is the seat of a fibroid growth is more prone to the development of carcinoma than is a healthy uterus.

According to Bandler, carcinomatous changes take place only when some of the epithelium which lines the uterine cavity is taken up into the structure of the fibroid by its growth, thus becoming separated from its parent endometrium.

Lynch and Maxwell state that carcinoma is not a degeneration of a fibroid, as it must arise from the epithelium. While fibroids may be invaded by cancer of the cervix, they believe the great majority develop as a result of the changes due to the presence of a benign tumor. It seems logical, therefore, that the presence of a large fibroid tumor over a period of several years could cause enough mechanical irritation to be an etiologic factor in the production of cancer of the cervix or even of other neighboring organs.

Authorities agree that inflammatory changes are important in the etiology of carcinoma of the cervix. A large fibroid of the uterus brings about many inflammatory changes in this organ and here again we have a basis for a direct relationship between the fibroid and a malignancy. The circulatory and inflammatory changes occurring in the uterus due to a fibromoma are fully as great if not greater than the changes due to pregnancy and other causes which authors agree are important in the etiology of carcinoma.

Of course no definite statement can be made as to the relation of fibroids to malignancy merely from the few cases here cited. A very logical relationship seems to present itself, however, and an interesting subject on which there is plenty of room for investigation is brought forth.

The question arises as to the advisability of removing fibroids early or upon recognition.

Graves states that many fibroids require no treatment; that small subserous tumors which are either stationary or of slow growth may be let alone but should be kept under periodic observation, especially if the patient is in the childbearing age. Atrophied fibroids of moderate size after the menopause do not need treatment if they are not producing symptoms but should be carefully watched for evidences of degeneration. On the other hand, large fibroids should be removed whether they are causing symptoms or not.

CONCLUSIONS

1. Carcinomatous changes in uterine fibroids are rare.
2. Carcinoma may occur as a complication of a fibroid.
3. While many fibroids require no treatment, removal safeguards the patient from future dangers.

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TREATMENT OF ERYSIPELAS WITH MERCUROCHROME-220 SOLUBLE

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From my experience during a short epidemic of erysipelas during the months of February and March, 1926, in the Dixon State Hospital, I found that mercurochrome-220 soluble is almost specific treatment for erysipelas and I think further trials should be given. My technic of the treatment was:

Seven per cent. freshly prepared solution of mercurochrome-220 soluble, painted over the involved parts twice daily. Of course, the parts should first be cleansed from greasy substances. The treatment should continue for two days after all symptoms disappear. It usually clears the swelling, inflammation, temperature, in 2 or 3 days, also considerably shortens the course and

makes the patient comfortable after the second or third application. The treatment is very practical for the reason that when applied it causes no irritation of any kind and there is no danger of overdosing. The only one objection found has been the staining.

The cases treated for erysipelas with mercurochrome were between the ages of 4 and 62 years, both sexes, and the results were similar in all the cases with no mortality. Following are three cases showing clearly the effect of mercurochrome-220 soluble:

Case 1.—V. C. was admitted to the hospital ward February 6, 1926, with temperature 102.8 and complaining of severe headache. There was a slight redness on the right cheek over a scar the patient had on that side of his face. Diagnosis was not made that day, but the patient was placed under observation. A dose of salts was given and also 3 grains of quinine. The next day (Feb. 7) the redness increased over the scar but it was not sufficiently large for basing a diagnosis. No treatment was given that day but patient was kept in bed.

Feb. 8, the left eye and part of the left cheek became considerably swollen with the line of demarcation and characteristic symptoms of erysipelas. His temperature elevated to 104.2 and he was very restless and complained of severe headache. Mercurochrome was unobtainable that day so hot Epsom Salts dressings were applied. Feb. 9, temperature elevated to 105.6; pulse, 112; respiration, 40. The involved parts were painted with mercurochrome 7% solution, and the following day (Feb. 10) temperature dropped to 99.6; pulse, 90; respiration, 20. Patient was very comfortable and the swelling had almost disappeared. From that day until Feb. 12, temperature ran from 98 to 99; pulse, 70; respiration, 16, but Feb. 12 the left ear showed involvement, temperature elevated to 101; pulse, 96; respiration, 30. The left helix was painted with mercurochrome 7% solution. The same day the temperature dropped to 98.8 and remained between 98 and 99.

Feb. 14, the right side of the face was inflamed, but the patient had smeared some of the mercurochrome on that side so that it was difficult to determine the nature of the symptoms. During the night the temperature elevated, and on Feb. 15 temperature was 104.6. Mercurochrome was applied immediately on the right side and by the morning of Feb. 16 the temperature had dropped to 99. From Feb. 16 to Feb. 18 the temperature ran between 97.2 and 99, after which it was normal. There were no further developments or complications and the patient was discharged from the hospital ward on Feb. 20.

Case 2.—F. S. was admitted to the hospital ward on Feb. 10, 1926, with typical erysipelatous eruption of both eyes and the nose. Temperature was 103.4; pulse, 120; respiration, 26. Patient complained of severe headache. The involved parts were painted with mercurochrome 7% solution, but by evening the temperature was 104. Feb. 11, the temperature dropped to 102 and

the swelling did not subside. By evening the temperature elevated to 103. We painted the face twice the next day with the mercurochrome and Feb. 12 the temperature dropped to 101 and the swelling subsided considerably. Patient was more comfortable, and the headache disappeared. Feb. 13, the temperature dropped to 96.4; pulse, 78; respiration, 14. For the next two days the temperature ran from 98.4 to 99.6. Patient was discharged from the hospital ward, Feb. 18, there having been no further involvements or complications.

Case 3.—F. P. was admitted to the hospital ward at noon on Feb. 16, 1926, with erysipelatous eruption involving both eyes and the nose. Temperature was 102.4 and patient complained of severe headache. At 5 p. m. the same day, temperature was 104 and the eyes almost closed. Treatment of mercurochrome 7% solution was started. Feb. 17, the swelling had considerably subsided and patient could see well with the right eye but the left eye was still swollen. That day the temperature varied from 103.4 to 104. The mercurochrome was applied twice daily.

Feb. 18, the swelling in both sides was scarcely noticeable and the temperature had dropped to 101.2. The patient was very comfortable and did not complain of headache.

Feb. 19, temperature dropped to 99.6 and in the afternoon of the same day the left ear showed inflammation and swelling. Temperature had elevated to 102.6 by evening. The ear was painted with mercurochrome 7% solution, and the following day (Feb. 20) temperature dropped to 99.2 and all the symptoms of the ear disappeared. After that the temperature was normal and patient was discharged from the hospital ward on the morning of Feb. 23, 1926, there having been no further recurrences or complications.

SOME INDICATIONS FOR SURGICAL TREATMENT OF PEPTIC ULCER OF THE STOMACH AND DUODEUM.

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Considerable difficulty is sometimes experienced in deciding whether a given case of chronic gastric or duodenal ulcer should receive further medical management or whether surgical treatment should be employed. This is especially true in those instances where no complication exists which can be considered a definite indication for operation but in which medical treatment has been tried for a more or less prolonged period of time without permanent relief.

In order to facilitate the choice of either medical or surgical treatment in these cases we have

made a study of the clinical course, results of medical management and we have followed up a number of patients after operation to determine various criteria which may enable us to recommend either further medical management or operation.

Our attention was first directed to the clinical course of uncomplicated peptic ulcer in order to find a deciding factor in the choice of treatment. It has been our experience that a patient is not likely to obtain marked and lasting benefit from further medical management if he has already undergone such a course of treatment for a number of months and if the symptoms return after the strict diet and use of alkalies have been discontinued. This is especially true in those cases where the "niche" of the ulcer, seen on x-ray, has not become much smaller after careful medical management. It is difficult to determine just how thorough the previous course of treatment has been so we usually place all patients on a very strict course of Sippy management for from four to six weeks unless we are certain that he has had such treatment before and that this management has been carried out conscientiously. Ulcers which are refractory to a course of careful medical management lasting several weeks or months or which recur shortly after such treatment is discontinued are usually larger calloused lesions and are often deep and associated with considerable cicatricial tissue. Patients with this form of ulcer should be treated surgically but we wish to put ourselves distinctly on record as advising further medical care for those patients who have long periods during which all symptoms are absent or in those instances where the recurrences are mild or easily controlled. Another important factor is the economic situation of the patient. We do not hesitate to recommend operation where the patient has tried out at least one course of well controlled medical management and when this patient is the sole means of support or where his financial condition is such that he cannot afford to spend several weeks in bed from time to time. We also do not hesitate to recommend surgery in these cases if the patient cannot follow strict dietary instructions so that recurrences may take place.

In addition to the foregoing we have learned to pay considerable attention to certain clinical

manifestations which we regard as very suggestive of impending perforation and we therefore look upon them as a distinct indication for surgical interference. We refer to a decided change in the clinical picture; the change from periodic pains of established severity coming on a definite time after meals with other symptoms of distress, to an abrupt turn for the worse in which the pain is much more severe, constant and no longer influenced by food or vomiting. In addition, there are frequently marked abdominal tenderness and often vomiting, a rise in temperature and a progressively increasing leucocyte count. Such an abrupt and decided change was noted in twenty-six of a series of thirty-nine cases before acute perforation occurred and this altered picture was present from ten hours to several days before the actual rupture occurred. On the other hand, there were seven cases in which no symptoms of peptic ulcer preceded the acute perforation while the remaining six patients had a previous history of ulcer but there was no exacerbation of symptoms before the perforation. We thus see that in this series of thirty-nine cases of acute perforation proved either at operation or autopsy, fully two-thirds gave definite warning of impending perforation several hours or days before the acute rupture actually took place. We naturally draw the conclusion that operation during this stage of warning would give the patient a far better chance for recovery than he would have, if this warning is not recognized, as the mortality in cases of ruptured peptic ulcer operated on averages forty to fifty per cent while the cases not operated on practically all die.

Another factor which we take into consideration is the location of the ulcer from the standpoint of possible malignant degeneration. Nearly all observers are agreed that duodenal ulcers practically never undergo malignant degeneration and we can, therefore, disregard this possibility in dealing with ulcer of the duodenum. The incidence of malignant degeneration in gastric ulcer is quite a different matter. Although we do not share the opinion that a very large percentage of gastric ulcers undergo malignant degeneration, we do recognize the possibility of such an occurrence which we estimate at from three to five per cent. in ulcers of the stomach. We consider it as a further argument for operation in chronic gastric ulcer which does not respond well

to treatment but hardly regard it as a prime indication by itself.

The decision to employ surgery is more easily made in cases of chronic peptic ulcer which is associated with certain complications. We have already referred to malignant degeneration of gastric ulcer and we shall now take up various other complications of gastric and duodenal ulcer which in our opinion should be operated upon.

A group of cases which in our opinion require surgery are those associated with organic stenosis or deformity and which do not respond to a course of well managed medical and dietary management or in which the symptoms return shortly after such treatment is discontinued. We must be certain, however, that the underlying process is due to connective tissue and not the result of pyloric spasm or inflammation in the region of the ulcer. Spasm and inflammation usually yield to a course of well planned medical management and all symptoms dependent on this form of obstruction usually disappear. A moderate degree of stenosis due to organic, connective tissue contraction also often improves under medical treatment if care is taken not to overload the stomach at any one time. The gastric musculature often hypertrophies sufficiently to overcome the obstruction in much the same way as the auricle overcomes a stenosis of the mitral valve with the result that there is a compensated condition and a resultant functional cure. There are many cases, however, in which neither dietary measures nor compensatory hypertrophy of the stomach musculature are sufficient to overcome the stenosis. Such cases can only be helped by operation and it has come to our attention that some of the best results have followed surgical treatment of peptic ulcer which was associated with a considerable degree of stenosis. The type of operation will depend greatly on the chemistry of the stomach contents. It has been our experience that pyloric stenosis associated with much hypersecretion of a highly acid gastric contents and which cannot be controlled by alkalies is best dealt with by subtotal gastrectomy. Anything short of such an operation will not deal with the continuous hypersecretion which is certainly an important factor in preventing permanent healing of the ulcer. On the other hand, simple retention of gastric contents but without the presence of acid hypersecretion as determined by frequent aspirations of the stomach contents,

especially at night, is very amenable to simple gastroenterostomy and this method of operation has produced excellent results in this particular form of stenosis.

Another complication which may occur and which may or may not require operation is hemorrhage. Opinion is divided as to the advisability of operating on each case of bleeding, especially if the hemorrhage has occurred for the first time. We do not recommend operation for bleeding which has occurred for the first time unless it is so severe that life is threatened. All cases of hemorrhage are watched closely and are not allowed to pass the danger point. Cases with repeated bleeding are usually treated surgically after transfusion if the latter is necessary. We do not rely on medical treatment if the hemorrhage is severe and recurrent as we have had the experience that the ulcer may apparently heal and all symptoms be absent and still copious bleeding occur without warning. One of our patients illustrates this very nicely. This man was treated medically for an ulcer which began with a profuse hemorrhage and remained free from bleeding and from all symptoms for eight years. Another hemorrhage occurred and medical management was again effective for three and one-half years but when a third hemorrhage occurred he decided to be operated upon. He was put upon medical management for a while to improve his general condition before operation and laparotomy revealed extensive scar tissue along the lesser curvature. There was no sign of open ulcer and we concluded that since his ulcer healed so promptly after a few weeks of medical treatment the lesion must have healed under the previous and more prolonged courses of medical care. This is further substantiated by the fact that he was symptom free for so many years. At the same time this man was exposed to the danger of profuse hemorrhage which occurred three times and which ultimately required surgical interference. The problem in this type of case is not so much to heal the lesion as it is to keep the ulcer healed so that hemorrhage may not recur. As a result of several such experiences we have adopted the policy of recommending operation in all instances in which the hemorrhage recurs one or more times, even though the gastric acidity remains controlled and all symptoms are absent during the interval.

The question of operation in a patient with

chronic peptic ulcer falling into any of the before mentioned categories is somewhat simplified by studying the post operative course. In connection with this we drew attention some time ago to a series of 22 cases of chronic ulcer which were followed up after operation at varying lengths of time. A result of this study showed that all cases, without exception, developed an achlorhydria after subtotal gastrectomy; a result greatly desired by both the internists and the surgeons as an important factor in the cure and prevention of recurrence of ulcer.

Further study of the post operative course in the before mentioned patients showed that in spite of the absence of free hydrochloric acid after operation there was practically no disturbance in the bowel function. Of 12 patients studied from this viewpoint two were constipated, one had diarrhea and the remaining nine were normal, showing that the operation had no deleterious effect on the function of the bowel. A study of the emptying time of the stomach, as observed by the use of a contrast meal, showed that the stomach emptied slowly in two instances, very rapidly in three cases and rapidly in ten patients of a series of fifteen who were studied from this aspect. All but two patients gained considerably in weight and one patient reported that he had put on seventy-five pounds after operation. Subtotal gastrectomy is our operation of choice because it fulfils four important conditions namely, it removes the lesion, it eradicates the conditions which are commonly supposed to be important in the production and recurrence of ulcer, it is practical, and leaves no bad after effects so that the patient is restored to good health and can go about his usual business.

Resume:

1. Surgical interference is indicated in those cases of chronic peptic ulcer without complications but which are refractive to a course of careful medical management lasting six to eight weeks or if the distress returns shortly after strict diet and medication are discontinued.

2. An abrupt aggravation of the symptoms, especially of the pain which becomes more severe and continuous and which is no longer relieved by doses of alkali which were formerly effective should awaken a suspicion that there may be an impending perforation. Such patients should be operated on at once and before perforation actually occurs in order to reduce the staggering mor-

tality which attends such cases even in the hands of the most expert surgeons.

3. Repeated hemorrhage or a single bleeding which threatens life should also be operated upon. The fact that a hemorrhage stopped spontaneously or that symptoms have been absent for many years is no definite evidence that the ulcer will not bleed again even though we are certain that the lesion has been completely healed.

4. Organic stenosis is an indication for operation if the gastric musculature is not sufficiently compensated to overcome the obstruction. Care must be taken, however, to exclude spasm or inflammatory narrowing of the outlet as both of these conditions are easily remedied by medical care.

5. Subtotal gastrectomy has produced achlorhydria in all instances and in addition removes the area in which ulcer is most common. These considerations and the subsequent result after operation lead us to accept this method of operation as a procedure of choice where surgery is indicated.

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ENTEROCOLIC FISTULA ON A CARCINOMATOUS BASIS*

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Spontaneous, fistulous communication between the small bowel and colon resulting from carcinoma is apparently an extremely rare condition, as we were able to find but one such case reported by Starlinger¹ and a brief description in Hilgenreiner's² exhaustive monograph on this subject. On the other hand, fistula between the large and small bowel is more frequent when secondary to operation for gastric or duodenal ulcer, especially when gastroenterostomy is performed. One of us³ reported two cases of gastro-jejuno-colic fistula following operation on the stomach and pointed out that an important and suggestive symptom was uncontrollable diarrhea with considerable undigested food in the stools, indicating rapid passage through the gastrointestinal tract. It was also pointed out that a positive diagnosis can be made only on roentgen ray examination and that it is important to recog-

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nize such fistulae as early as possible and before a considerable degree of malnutrition develops. Early diagnosis and operation is even more important when the lesion is due to carcinoma, as it may be possible to take suitable measures while the outlook for cure is still good. It is for these reasons that we wish to report the following case of fistula between the small intestine and sigmoid which unfortunately came too late for operation but which shows certain signs and symptoms which could have made earlier diagnosis possible.

Case. Male, age 63 years, married, a painter by trade, was admitted to the St. Elizabeth Hospital, on May 25, 1926. The patient complained of diarrhea



Fig. 1.

Illustration of x-ray plate showing—
"A"—Loop of small bowel filled by barium enema passing directly from sigmoid to this portion of the small intestine.

"B"—Large filling defect in sigmoid.

which he first noticed about two years before admission to the hospital and which had become progressively worse until he had from 10 to 15 stools daily. Although he never saw any blood in the stools he was not sure that none had passed. There was no alternating constipation with the diarrhea. The patient lost 40 pounds in weight during the past six months and a total of 80 pounds in the last two years, and with this a marked loss of strength. His greatest complaint was that any food which he took "ran right through him" so that much of the food eaten a short time before could be recognized in an undigested con-

dition in the stools passed shortly after the meal. There was nothing of significance in the past or family histories which could have any bearing on his present trouble.

Physical examination revealed a poorly nourished male with no abnormal findings in the head, neck or chest except a slight enlargement of the cardiac dullness. A large, hard, nodular mass was found firmly fixed a little to the left of the symphysis pubic. Nothing abnormal was found in the extremities. The urine was normal.

Roentgen examination of the colon with a barium enema revealed a filling defect extending for a distance of about 15 cm. in the region of the sigmoid and giving the typical appearance of carcinomatous involvement of this portion of the bowel. The defect corresponds to the location of the mass and is tender and fixed. During the passage of the opaque mixture into the bowel a portion of the barium was seen to pass into a coil of small bowel in the right lower quadrant. These findings were further corroborated on the film which showed some of the barium passing up along the colon and some entering a segment of small bowel through a fistulous communication with the upper portion of the sigmoid. The examination was stopped when the head of the barium column reached the splenic flexure as the patient was unable to co-operate further. A diagnosis of enterocolic fistula on a carcinomatous basis was made with the original focus probably in the sigmoid.

The patient was in very poor general condition and it was not deemed advisable to perform any radical operation. He was discharged with instructions relative to diet and symptomatic treatment until other measures should become necessary.

Resume:

1. A case of spontaneous enterocolic fistula due to carcinoma is reported because we could find but one other such report in the literature and because all authors are agreed that this condition is very rare.

2. The importance of diarrhea in which the stools contain undigested food eaten shortly before is again emphasized as a significant manifestation of enterocolic or gastroenterocolic fistula.

3. The absolute diagnosis of enterocolic fistula can be made with certainty on roentgenological examination.

104 S. Michigan Ave.

Note: The above cases are reported through the courtesy of Dr. Leslie D. Dougherty and Dr. E. E. Henderson.

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THE SIGNIFICANCE OF PAIN IN PARANASAL SINUSITIS.

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Every age of our civilization has had its customs and usages respecting scientific problems. New knowledge, acquired by research and otherwise, is continually eradicating the false doctrines or those unsupported by facts.

The same conditions obtain in medicine. Learning and education becoming compulsory throughout much of the world, every day we observe old ideas and theories in our medical curriculums abandoned while definite and proved knowledge takes their place.

The new knowledge constantly discovered is burdening the professions to such an extent that many subdivisions must be made in order to practice them intelligently.

Medical science has become so large that no individual intellect can practice it intelligently without specializing.

The specialties of otology and ophthalmology were long linked together, laryngology attached to diseases of the chest. Now we have more divisions; we even have the specialist on tonsils and the specialist on accessory nasal sinuses.

It is not my purpose to advocate an increase in the number of specialties, but I do think each oto-laryngologist should devote part of his leisure time to a certain piece of research work within his specialty.

About the first book in the English language on the nasal sinuses was written in 1842 on the maxillary sinuses by an American dentist by the name of Harris, who lived and practiced in Philadelphia. He presented his dissertation to the American Society of Dental Surgeons, at their annual meeting, held in Boston, July 20, 1842.

A comparison of the diagnosis and methods of treatment at that time and during the next fifty years with that of today is only another gigantic advance in the progress of scientific medicine.

There is one important thought the reader retains from perusal of Dr. Harris' book, and that is the symptom of pain that was ascribed in the majority of cases, to the teeth. Today pain is still the most important subjective symptom, but the teeth are known to be the rarest cause.

In this very modern and special observation of diseased conditions of the paranasal sinuses, we

want to draw some very pertinent evidence as to the value of pain in determining a diagnosis of sinus involvement.

The title of this paper indicates that the cases hereinafter enumerated suggest pain in the acute as well as in the chronic infections of the accessory sinuses of the nose as the most important subjective symptom presented. The pain may be severe, insignificant, or entirely absent. It may be continuous or intermittent; it may be located over the cavity involved or referred to areas far remote from its origin, affording but little indication as to which sinus is affected. It may take the form of headaches or neuralgias, which make a diagnosis difficult if not impossible without a systematic and orderly physical examination, including a complete personal history, transillumination and x-ray pictures, character, amount, location and source of all discharge, inflammatory or non-inflammatory changes of anatomical structures.

A summary of all the information obtained will enable us to arrive at a definite diagnosis and to apply successful treatment.

Considering the extent of the subject and the time allotted, I have thought it best to confine the cases reported to chronic maxillary sinusitis.

I desire to report a number of cases of sinus infections and consider the significance of pain in determining a diagnosis of involvement.

For the purpose of this study I have abstracted 30 cases of sinus involvement from my histories of the last ten years and which I have made a part of this paper. I do not intend to read the details but to examine them for the purpose, if possible, of discovering the percentage of cases where pain is a symptom and the value that can be placed on this in diagnosis.

CASE REPORTS

Case 1, March, 1924. Miss E. F., aged 39 years, school teacher.

Diagnosis—Chronic double maxillary sinusitis.

Consulted me for headaches, giving the following history; early in January, 1923, she began to suffer from frontal headaches. At first they were at intervals of three or four days; they soon became continuous and were more severe.

She sought relief by attention to her eyes and the use of headache medicine, saying that she practically "lived on aspirin." Besides the frontal headache she began to complain of pain at the back of the head and neck, and a dizzy feeling that was made worse by stooping. The pain had become so

severe that she decided that her life was not worth living.

A complete recovery of her health was attained by curing the sinusitis.

Case 2, May 25, 1925. Miss C. A., aged 59 years; school teacher.

Diagnosis—Chronic maxillary sinusitis, right side—complicated by disseminated choroiditis.

Consulted me for her eyes, stating that her glasses were not satisfactory. A slight change was noted in her refraction—a fundus examination discovered a choroiditis which was more pronounced in the right eye than in the left. Pain, in a mild form and at intervals of several days, was experienced in the right eye. She noticed a haziness and short lapses of vision. With a correction her central vision was normal, 20-20 respectively in each eye.

In seeking the cause of the choroiditis the pus in the sinus was discovered. She then admitted suffering from a nasal catarrh for the last fifteen years. She was very susceptible to colds and usually hawked and spit in the morning. Sinus irrigation demonstrated pus, foul in character, in the right maxillary sinus. Operation removed the pain in the eye and corrected her nasal catarrh.

Case 3, March 24, 1924. Miss N. B., aged 22 years; telephone solicitor.

Diagnosis—Right chronic maxillary sinusitis.

Complained of a severe continuous pain over the right eye without any definite and marked periods of relief. The floor of the frontal sinus was very sensitive to external pressure. She had been annoyed by a loathsome, musty, odorless discharge from the right naris for many years. Drainage and cure was accomplished by making a large opening beneath the inferior turbinates—relief from pain and odor followed.

Case 4, January, 1924. Mrs. K., aged 47 years.

Diagnosis—Chronic right maxillary sinusitis.

Complained of nervousness; was weak and tired. Had a profuse discharge from right maxillary naris; no pain, headache or cough. The condition followed a chronic suppurative process of the sphenoid and ethmoid in January, 1924, when a radical operation was performed.

Case 5, January, 1922. S. S., aged 20 years; violinist.

Diagnosis—Right chronic maxillary sinusitis—deflected septum.

Complained of being tired and nervous; no pain of any kind; nasal obstruction; ears blocked; loss of smell, and an odor of kerosene. Duration; four years; always suffering; flowing pus from both nares and throat. I irrigated foul pus from right antrum; operated on septum; improved natural drainage; cured.

Case 6, July, 1924. A. B., 46 years; bookkeeper.

Diagnosis—Right chronic maxillary sinusitis.

Complained of pain in right side of throat, which starts at noon, stops at 3 P. M., returns at 8 P. M.,

and disappears by morning. Nervous; five months' duration, also pain in the left temporal region. Inferior maxillary opening cleared up.

Case 7, January, 1924. Mr. O. B., aged 41 years; factory worker.

Diagnosis—Chronic double maxillary sinusitis.

Intense pain in both ears; frontal headaches, dull and heavy in character; nasal obstruction; foul nasal and throat discharge; hoarseness and a cigarette cough; weak, tired and loss of interest in living. Caldwell-Luc radical operation and relief of all symptoms; gain in weight and enjoyment of life.

Case 8, November, 1923. Mr. J. F. M., aged 46 years; grocer.

Diagnosis—Double chronic maxillary sinusitis.

Consulted me en route from his home in Cape Breton, Nova Scotia, Canada, to the Mayo Clinic, Rochester, Minn.

He had supra-orbital headaches; dull pressure pains, bursting in character over maxillary sinus areas for more than a year. At times pains radiating along the distribution of the trigeminal nerves. Symptoms of toxic absorption were much in evidence. Caldwell-Luc operation. He returned home in January, 1925, satisfied with the results.

Case 9, December, 1923. Mrs. W. A., aged 44 years.

Diagnosis—Chronic double maxillary sinusitis.

Complained of frontal pain, dull aching in character, above eyes, relief for a few days, then a cold and a renewal of pain; one and half years duration.

Commenced in decayed teeth, but cough, headache, nasal discharge and nasal obstruction continued. Caldwell-Luc operation, three days later a severe attack of septic pneumonia; recovery.

Case 10, June, 1919. Mr. L. B., aged 32 years.

Diagnosis—Chronic left maxillary sinusitis.

Periodical nasal discharge, bloody and yellow, lasting from one to four months. This has been going on for five or six years. It seems he has had many colds, no pains of any kind; no aching teeth. Pus irrigated from left antrum; none from right at this time.

X-ray showed right upper second bicuspid with an infectious root; extracted by Dr. Earl Thomas; patient soon recovered.

Seen a year later; no recurrence.

Case 11, May, 1920. Mrs. J. W. E., aged 50 years.

Diagnosis—Double chronic maxillary sinusitis.

Always a pain over left eye if unable to dislodge discharge by blowing of nose. Duration five months. Senses of taste and smell impaired; nasal obstruction and discharge.

Both antrums operated on.

Caldwell-Luc exenteration of left ethmoid; gained flesh and recovered health.

Case 12, March, 1921. E. J. H., aged 20 years.

Diagnosis—Left chronic maxillary sinusitis with polypus.

Dry hacking cough; no headaches or pain of any sort or character. Unable to tell when nasal condition

commenced other than of several months duration. Operated on; cured.

Case 13, May, 1925. Mr. T. F. L., aged 58 years; printer.

Diagnosis—Right chronic maxillary sinusitis.

Complained of right nasal discharge off and on for years; no pain of any kind; only complaint, right nasal obstruction and discharge.

Case 14, March, 1923. Mrs. N. L., aged 30 years.

Diagnosis—Double chronic maxillary sinusitis.

Tired and nervous for last few years; no pains; both nares flowing yellow secretion.

Case 15, January, 1925. Mrs. G. N., aged 40 years.

Diagnosis—Double chronic maxillary sinusitis complicated by ethmoiditis; no polyp.

Nasal obstruction and rhinorrhea; no pus. Maxillaries drained. Cured. No pain or headaches, sneezing, nasal obstruction, mucopurulent discharge.

Case 16, January, 1919. Mrs. H. L. G., aged 32 years.

Diagnosis—Right chronic maxillary sinusitis.

Complained of a pulling pain in right eye, supra-orbital pain, radiating to temple and root of nose; eye feels weak.

Duration, off and on for last twelve years. Nasal obstruction and discharge from right nares. Irrigated right antrum; pus; decayed teeth extracted. Recovery.

Case 17, March, 1920. Mrs. E. H., aged 73 years.

Diagnosis—Right chronic maxillary sinusitis.

Suffering from arthritis, especially of small joints of hand.

Discharge from right nares since 1917. Irrigated; stinking pus removed. Caldwell-Luc operation. Slow recovery and freedom from rheumatism.

Case 18, August, 1919. Mrs. G. K., aged 42 years.

Diagnosis—Chronic left maxillary sinusitis.

Pain around left eye and top of head; an intoxicated feeling; vertigo attacks; excessive nervousness. Intoxicating attacks commenced two weeks previous. Discharge from left nares for two years. Defective teeth; extracted teeth; drained left antrum under inferior turbinate. Recovery.

Case 19, March, 1922. Mrs. C. A. F., aged 55 years.

Diagnosis—Chronic left maxillary sinusitis.

Pain over left eye; cough; nasal catarrh. Duration several years. Irrigation over a six-week period relieved her of the pain and all other nasal symptoms.

Case 20, October, 1924. Miss A. B., aged 16 years; student.

Diagnosis—Chronic right maxillary sinusitis.

Consulted me for defective hearing; impacted cerumen.

Discovered nasal obstruction; running nose; no pain. When asked how long her nose discharged she replied, "as long as she could remember." Opened lateral wall and drained.

Case 21, September, 1923. Mr. W. D. D., aged 43 years; steel employee.

Diagnosis—Chronic double maxillary sinusitis.

Consulted me for insomnia, nervousness and nasal discharge, the latter for a period of ten years. No pain. Caldwell-Luc operation. Cured.

Case 22, March, 1925. R. D., aged 19 years; student. Diagnosis—Chronic right maxillary sinusitis.

Was in a highly nervous state of mind; no definite area of pain; nasal obstruction; a free discharge from both nares.

A septal operation from a submucous allowed pus to flow from both nares on account of a puncture of septum.

An immense swollen right inferior turbinate had been diagnosed as a nasal polypus. The right antrum was given the proper attention and in a few weeks he returned to college practically normal.

Case 23, September, 1918. F. L., aged 55 years; farmer.

Diagnosis—Chronic right maxillary sinusitis.

Pain over right side of face, but no headaches. He stated that this pain was different from anything he had ever experienced before; it just seemed that his face would burst at about 9 A. M. every morning, then would occur a profuse, stinking flow of cheesy material from the right nares. Noticed first in February, 1918.

During all the summer he has had pain in the biceps of left arm; creaky joints; feels tired; no ambition; no pep.

X-ray showed no dental trouble. Irrigation. Cured.

Case 24, June, 1919. W. McL., aged 32 years.

Diagnosis—Chronic left maxillary sinusitis.

Constant pain over left antrum and left eye; pain over eye worse when he gets a cold, which is about every six weeks. He dates beginning of trouble about December, 1918.

He has had a yellowish discharge from both nares and throat for over two years. He had been told by physicians that he had catarrh. Operated on lateral wall and cured of all symptoms.

Case 25, September, 1917. Miss F. P., aged 45 years; clerk.

Diagnosis—Chronic double maxillary sinusitis.

She had been under the care of Dr. Montgomery, Los Angeles.

Nasal discharge and tempora-frontal headaches last ten years, until her doctor made the sinus diagnosis. Opened both lateral walls four months ago; right sinus now free from discharge; small amount in left.

Case 26, May, 1918. Miss L. R., aged 50 years; seamstress.

Diagnosis—Chronic left maxillary sinusitis.

Complained of pain over both eyes; hawking and spitting in the morning; nasal obstruction. Had been told on several occasions that for years she had nasal catarrh. Irrigations by needle puncture for three weeks. Cured.

Case 27, May, 1919. M. A. R., aged 29 years; cook.

Diagnosis—Chronic left maxillary sinusitis.

Heavy feling over antrum.

This patient had suffered a year from frontal headaches; had consulted a dentist.

Made an opening into antrum in canine fossa, cleaned out cheesy stinking pus; opening now closed.

Irrigated through lateral wall, needle puncture, and made an opening for drainage. Discharge. Well.

Case 28, July, 1917. Mrs. R. S., aged 52 years; housewife.

Diagnosis—Chronic right maxillary sinusitis.

Eczema of eyelids off and on for last two years.

Examination showed pus in right maxillary sinus and operative perforation in septum ten years standing. Irrigation of sinus over a period of three weeks cured the discharge and the eczema passed off.

Case 29, November, 1916. Mrs. J. S., aged 33 years; housewife.

Diagnosis—Chronic left maxillary sinusitis.

Came for chronic left otitis media; operation. Cured.

Returned in October, 1919; frontal headaches, chiefly on left side; free nasal discharge; unable to tell when she had no nasal discharge, but headaches were of recent date.

Needling of lateral wall; drainage for one year without improvement. Caldwell-Luc in October, 1920. Recovery.

Case 30, December, 1917. Mrs. O. V., aged 34 years; housewife.

Diagnosis—Chronic left maxillary sinusitis.

Stinking left nasal discharge; nasal obstruction.

Arthritis in joints of right great toe and both ankles. In 1916 had a severe neuralgic pain over left eye; subsided; now no pain.

Large opening in lateral wall (nasal) cured nasal condition and rheumatism.

SUMMARY

The cases which I have made part of this paper present varied aspects: In two-thirds of the cases pain is a pronounced symptom, in one-third it does not play an important part.

In cases in which pain does not figure the patient is very apt to underestimate the seriousness of his condition and to delay seeking the treatment which he requires.

In those where much pain occurs he is more apt to seek treatment immediately. When the patient finally appears at the physician's office he will of course speak of the symptom which alarms him most; he will perhaps speak of a headache and attribute it to his eyes. Perhaps he had heard of an acquaintance who had been similarly afflicted and a correction of his glasses had brought about a change in his health.

The physician, however, must go into the question much further. While it is true that in many cases the correction of the patient's glasses, if he already has them or providing him with them, if he has not, may be all the treatment that is necessary, on the other hand the real cause may exist in one of the sinuses and as suggested in a

preceding paragraph a thorough search should be made for any pathological condition.

The sinuses and air cavities may be in an abnormal condition and yet cause neither objective nor subjective symptoms and long continue in this way, until symptoms become more noticeable, but the damage during this period of low activity may have been so great as even to eventuate fatally. Dr. Harris, nearly a century ago, called attention to this danger.

Continuous pain of course indicates abnormality and its cause must be ascertained and in like manner discharges, coughs, etc., indicate the same thing.

It is to be noted in these cases that the pain is confined to no particular area. I am aware, however, that Dr. Ross Skilleren of Philadelphia, in his most excellent treatise on diseases of the accessory sinuses says that each set of sinuses present its own definite area of pain.

In the detail of severity and frequency of pain it is to be observed that there is a wide range. Patients describe their pain all the way from "mild to bursting" and from "off and on" to continuous. Different causes modify pain, e. g., emotional persons suffer extreme pain, while the phlegmatic, slowing moving, slow thinking, easy going, and even those having a low resistance, suffer little or no inconvenience except a bother of keeping their noses clean.

It is possible that pain may appear at some unusual place such as the joints of the great toe, small joints of hand, top of head, ears and the throat. These unusual symptoms are undoubtedly due either to toxic absorption lowering the resistance and causing a neuritis or the tissues in the path of the trigeminus or fifth nerve group, may give pain symptoms due to pressure from swollen infiltrated structures or pressure due to pent up discharges.

Since the most competent writers of a hundred years or so ago were dentists, it is not strange that the chief cause of pain in maxillary sinusitis was attributed in most instances to the teeth or locked pus cavities. These theories still persist today with a large part of the medical profession.

An analysis of my cases compels me to believe that these old theories, with a very few exceptions, should be abandoned. Nevertheless, we are greatly indebted to the dentists for the pioneer work done by them in this field.

A knowledge of the disease of influenza and the

science of teeth hygiene practically eliminates the teeth as a cause of maxillary sinusitis.

30 North Michigan Ave.

AXIS-TRACTION FORCEPS—THEIR PLACE IN OBSTETRICS

JOHN JOSEPH GILL, M. D.
CHICAGO

The forceps devised by Tarnier in 1877 and later greatly improved by him, is, under certain pathological conditions, an efficient aid in delivering the baby through the mother's pelvis.

I will refer to these forceps as high forceps in contradistinction to low forceps, those of the Simpson type.

High Forceps Differ from Low Forceps in Several Ways

1. High forceps are much longer, 42cm long, Simpson's only 35.5cm.
2. The blades are narrower and less curved.
3. They have an angle jointed handle and pull rod.

The Trouble With Low Forceps

1. The mechanism of labor is changed.
2. The handles pull in the wrong axis, much strength is lost in pulling around an angle.
3. The blades are too wide and the cephalic curve too great for high application.

Criticisms Against High Forceps

1. The instrument is too complicated to be practical.
2. Birth mechanism is unchanged, they cannot rotate the head.
3. Pressure is always the same.
4. Blades are apt to slip on account of their breadth and curve.
5. Operations very bloody, lacerations of cervix and perineum.
6. Severe injuries to the baby's head.
7. Weakness in the double jointed traction handle.

The Virtues of Tarnier's Forceps are the Very Factors Which Offset the Criticisms Against Them

1. Efficiency is obtained at the sacrifice of simplicity.
2. Mechanism of nature is unchanged. They do not rotate the head and for that simple reason

permit the head to enter the pelvis in the most favorable position possible.

3. Pressure is always the same; yes, always that firm, even, gentle grasp that holds the pull without injury.

4. Slipping forceps result from three causes:

a. Wrong diagnosis; head too large or too small, macerated or perforated.

b. Errors of art; blades not applied high enough over the head or the handles are raised too quick after applying.

c. Forceps may be poorly tempered; the blades may be too weak and thus feather.

5. Bleeding from lacerated soft parts is caused by faulty technique, not the fault of the forceps; the fault is:

a. Disregarding the conditions for their use, such as dilated cervix, ruptured bag, moulded head.

b. Blades not properly applied, handles incorrectly adjusted, traction badly executed.

c. Undue haste and too much force exhibited in the delivery.

6. Head injuries may show lack of skill or want of judgment, both of which can be corrected or improved by experience.

7. Weakness of traction joints should only emphasize the importance of gentleness and circumspection.

High Forceps Has Four Advantages Over Version

1. They may be used at any time during the second stage of labor if the head is accessible.

Version is impossible after retraction of the uterus has occurred.

2. Baby can breathe after forceps operation and there is no further danger of asphyxia.

After version the child has still to undergo the dangers of a breech extraction.

3. The head can be drawn through the pelvis by axis-traction forceps in the axis of the inlet so that no force goes to waste.

The after coming head cannot be delivered in the axis of the inlet because traction on the body pulls the head against the os pubis therefore requiring more than necessary force.

4. In favorable cases an hour or more may be taken in forceps delivery, allowing the head to mold to some extent.

After version the subsequent extraction is hurried and when the shoulders are visible, only a

few minutes are permitted for the subsequent extraction of the head to prevent asphyxia.

Rapid delivery either by forceps or after version too often result in injuries to both mother and child.

Scope of Application for Axis-Traction Forceps

One must be absolutely positive about three things:

1. Indications which threaten the life of mother or child.
2. Conditions which offer safety to the child without injury to the mother.
3. Position occupied by the baby in order to most easily deliver with the least risk.

Indications for Their Use

1. Threatened rupture of the uterus.
2. Toxemias, under certain conditions.
3. Labor long delayed after bag of water ruptures.
4. Diagnostic trial traction before resorting to craniotomy.

Conditions Necessary to Insure Success

1. Baby must be alive.
2. Cervix must be effaced and dilated.
3. Bag of waters must be ruptured.
4. Head must not be too large for the pelvis.
5. Deformities or growths shall not interfere.
6. Pelvis at least 8.5cm in flat, or 9cm if generally contracted.

Application of Axis-Traction Forceps

1. Proper grasp of fetal head.
2. Traction in the line of the pelvic axis.
3. Indication by the handles as to the axis of the pelvis wherever the head may be.

Three Complex Factors Must Be Considered

1. The pelvic canal a curved tube of irregular and unequal walls, the inlet axis extending in the direction of a line drawn from the umbilicus to the tip of the coccyx with a bow shaped exit toward the vulvar outlet.

2. We assume the fetal head to be an irregular ovoid on a pivot.

3. The head fills the pelvic canal, compresses the soft parts against the bony frame, takes the shape and follows the curvatures of the birth channel.

Fetal Head Heights Considered

1. Floating, when the head moves freely above the pelvic brim.

2. High, where the head is partially descended into pelvic canal, but greatest circumference has not passed the superior strait.

3. Mid or sacral cavity position, when at or just above the ischial spines.

4. Low, presenting part rests on perineum or is well below a line joining the ischial spines.

When Axis-Traction Forceps May Be Used to Advantage

Normal pelvis: Four conditions may arise which will demand relief for which Tarnier's forceps shall be considered.

1. Uterine inertia; exhausting pains, poor contractions, no progress, cervix dilated, water drained. Axis-traction forceps show precisely how to augment that defective power.

2. Large baby; head wedged in the canal, hard uterine contractions, threatened rupture. Here the forceps economize the force, relieve tension, assure a safe delivery.

3. Malposition; traction without distortion draws the head into the most favorable position for extraction.

4. Toxemia; where conditions do not improve, when time permits, prepare the parts and deliver with forceps as a matter of expediency and safety for both mother and child.

Flat Pelvis

Forceps here must compete with version; each have their advantages and the decision should be carefully made.

Head transverse occipital and frontal wedging under the parietals; the blades may be placed over the antero-posterior diameter of the head, their pelvic front point toward the symphysis; this is easy and not objectionable.

If one hesitates to apply a blade over the face, use the alternative, one blade over the malar bone and the other over the mastoid, which is more difficult and may cause facial paralysis.

In this situation the more modern Kielland forceps seem preferable but harder to apply and with greater risk of injuring the uterus.

Generally Contracted Pelvis—Axis traction forceps in this case promote fixation and draw the head into the most favorable attitude.

Head in the Sacral Cavity—In this situation Tarnier forceps while useful are not so necessary, but the delicate perception of changing direction imparted to the handles, enable us to ad-

just our traction, giving easy control of the delivery.

CONCLUSIONS

Tarnier's axis traction forceps are the ideal instrument for inlet plain deliveries, they are also of great advantage when the head is caught in the sacral cavity.

They serve best in borderline cases when indications for version have passed, Cesarean section in unattainable and mutilation is unwarranted.

Experience alone enables one to judge conditions of the soft parts, to realize the limit of space between head and pelvis and to appreciate the still further effect of traction. Through practice one acquires the skill to repair any damage inflicted either from choice or by accident.

The head stethoscope is a convenient essential in detecting signs of fetal asphyxia to determine the necessity for a hasty delivery.

Axis traction forceps engender dangers and difficulties which if recognized may be avoided. The experienced operator will be able to estimate in advance the results of their application in terms of success or catastrophe.

5708 Harper Ave.

Society Proceedings

ADAMS COUNTY

The annual picnic of the Adams County Medical Society, held at Camp Irwin in Martindale, August 12, in charge of the Entertainment Committee of the society, was an all-day affair, the members and guests beginning to arrive about 10:30 A. M., and all did not depart until dusk. There was a total of 82 members and guests present.

The entertainment consisted of horseshoe, base ball and cards. A splendid chicken dinner was served by Clyde Collins at 1:15 P. M., following which there were a few short addresses, Dr. Wells acting as toastmaster. Dr. G. H. Mundt, president-elect of the Illinois State Medical Society, spent the entire day with us and gave a short talk on the value of medical organization work. The following write-up of the picnic from the *Quincy Herald-Whig* of August 13 gives a good idea of the fun we had:

"Members of the Adams County Medical Society and their many guests assembled at Camp Irwin for their annual outing Thursday, were given a picture of the ideal doctor of the future by Dr. G. Henry Mundt, president-elect of the Illinois State Medical Society, in a brief but interesting after-dinner speech.

"The doctor of the future must add to his achievements in the field of science a certain business acumen to properly protect himself and society, the eminent speaker said. In the past the doctor had devoted his years to study and his days and nights and Sundays and holidays to serving the public. He has not always

safeguarded his own interests. Dr. Mundt believes in organization, in recreation, in speculation, and said it was high time the doctors saw to the economic side of the picture.

"Dr. Mundt is a most personable man and enjoyed the outing with the best of his professional fellows. He can smoke and chat and dispose of half a chicken and then talk about it in the most casual way. He was at home in the chummy woodland which formed the picnic grounds and there were not enough mosquitoes in Adams County to cause him the slightest anguish.

"Dr. Clarence A. Wells was toastmaster and introduced one to another and urged all to have another piece of chicken. There was much merriment, play and amusement and lots to eat.

"Dr. Grant Irwin and Dr. A. H. Bitter decided they were the champions at horseshoes after they worked for a solid hour against Dr. J. W. Hermetet of Macomb and his partner, without getting a single ringer. Dr. C. D. Center, sergeant-at-arms, stopped the game.

"Dr. L. H. A. Nickerson, the oldest doctor on the ground in point of active service, got the notion from the cooling river breeze and the shaded landscape, that he could play ball. He was swinging for his home run when he broke the bat. G. D. Lehne of the Upjohn Chemical Company, fielded balls from post holes, the river and the high weeds, wondering what manner of man it was that introduced baseball at picnics. Dr. Walter Stevenson took motion pictures of the crowd at the dinner table and intends to show the film at the next meeting of the Adams County Medical Society—that is, maybe he will.

"Dr. Milton Bitter was the baby member of the group, but his actions at the table did not disclose it. Dr. Beirne had the biggest appetite but didn't get the greatest portion. Drs. Knox and Center pulled caps and acted as guides to the melon box. Dr. J. L. Aleshire, Plainville, rested a good share of the afternoon under a cool tree, figuring out a plan to live 100 years. Dr. G. H. Henry of El Dara, got lost on the grounds and praised the prophets for medicine and Pike County. Dr. Harold Swanberg and Dr. A. J. Blickham carried the money box and were successful at it.

"There were some dentists there. Dr. L. H. Wolfe held a clinic on a set of hen's teeth and offered to lick the guy that passed him a plate of chicken necks. Dr. E. F. Koettters was a kind of guardian angel to them all. The committee included Dr. Grant Irwin, Dr. Walter Stevenson and Dr. J. L. Aleshire and splendid work was done by them."

HAROLD SWANBERG, M. D.,
Secretary.

LEE COUNTY

Lee and Ogle Counties Medical Societies held their annual joint open air medical meeting and picnic at Lowell Park on the Rock River near Dixon on Thursday, July 29, 1926. An exceptionally interesting program had been prepared, as follows:

Some snappy songs by some of Dixon's pretty girls.
A few songs by every one of us.

"Backache"—Phillip H. Kreuscher, M. D., Chicago.

"Treatment of Fibroids, From the Standpoint of the Pathologist"—Channing W. Barrett, M. D., Chicago.

"Classification of Goiter"—John E. Tuite, M. D., Rockford, Ill.

"Reminiscences" by W. B. Peck, M. D., Freeport, Ill., who has just returned from the Medical Clinics in Europe.

Seventy-four doctors and sixty-one nurses and ladies registered coming from La Salle, Streator, Oglesby, Peoria, Clinton, Savanna, Freeport, Rockford, Sycamore, De Kalb, and all cities within that circle. One hundred thirty-eight of those present remained to enjoy the special dinner prepared by Mrs. I. S. Grabill at the Lowell Park Lodge. Nearly every one enjoyed a launch ride on the river in the evening. This annual meeting is the largest one held in this part of Illinois and is becoming more and more popular each year.

KENYON B. SEGNER, Secretary.

OGLE COUNTY

The Ogle County Medical Society met in regular session at the Court House, Oregon, July 21 at 1:30 p. m., 1926, President Akins presiding. Roll call found, that with a membership of twenty-five, eighteen members were present, in view of the fact that Old Sol was 95 degrees in the shade.

Dr. G. Henry Mundt, Chicago, president-elect of the Illinois State Medical Society, gave an excellent and instructive talk, illustrated with the lantern slide, on "Nose and Throat Infection, From the Standpoint of the General Practitioner." This subject brought out an able discussion by Drs. Sheldon Clarke of Freeport; W. A. McNichols, Dixon, and J. E. Tuitue, Rockford.

Buda C. Keller, director of the Lay Education Committee, Chicago, gave a lecture on "The Business Side of the Practice of Medicine." The speaker gave practical and forcible arguments on her theme which was conclusive evidence that she was well versed on the subject. The discussion brought out a good talk from Dr. D. Lichty, Rockford, followed by Drs. Beveridge and Beebe.

On motion by Dr. Kittler, the society, by rising vote, extended to Dr. Henry Mundt and Buda Keller, sincere thanks for their able assistance in making our meeting a success. Dr. C. P. Clarke of Rochelle was voted in as a new member of the society.

A new fee bill was adopted by the society and the president appointed a committee to secure the signatures of every doctor in the county to support the fee bill and report results September 1, 1926.

The secretary was instructed to have fee bills printed in leading newspapers in county.

Motion made by Dr. Kittler that the next meeting be held at Lincoln Hospital, Rochelle. Carried.

Adjourned to meet in regular session October, 1926.

DR. J. T. KRETSINGER, Secretary.

Marriages

ALBERT GOTTLIEB GUMM to Miss Margaret Blau, both of Paris, Ill., June 12.

LEO MERRILL HENIKOFF to Miss Dorothy Cooper, both of Chicago, June 27.

ALBERT L. LASH to Miss Mildred Pikowsky, both of Chicago, August 8.

HARVEY W. SEARS, Bluffs, Ill., to Miss Jessie Austin of Jacksonville, June 27.

MAURICE RULON WILLIAMSON to Miss Dorothy Corbett, both of Alton, August 21.

Personals

Dr. James L. Miller has resigned as city health physician of North Chicago.

Dr. Frank G. Norbury addressed the Pike County Medical Society, Griggsville, August 5, on "Encephalitis."

Dr. Gottlieb A. Lurie has been assigned to the U. S. Coast Guard cutter *Unalga* stationed at Juneau, Alaska.

Dr. James S. Archibald, Peoria, has been appointed head of the department of radiology at the Decatur and Macon County Hospital, effective August 15, to succeed Dr. Clarence J. McCullough.

Dr. Mary McKibben Harper, Maywood, has accepted the office of editor and manager of the *Bulletin* of the Medical Women's National Association.

Dr. Carl A. Hedblom, professor of surgery, University of Illinois, will deliver a series of lectures before the sixth annual summer school of the Vancouver Medical Association, Vancouver, B. C., September 13-16.

Dr. G. Henry Mundt, Chicago, president-elect, Illinois State Medical Society, addressed the Adams County Medical Society, August 12, on the occasion of the annual picnic at Camp Irwin, near Quincy.

Dr. Effa V. Davis has been elected president of the Chicago Council of Medical Women; Drs. Alice I. Conklin and Sarah M. Hobson, vice-presidents; Dr. Agnes Beulah Cushman, secretary, and Dr. Mary M. S. Johnstone, treasurer. The council will award a \$25 prize to the author

of the best original paper read before it in the next year. Inquiries should be addressed to Dr. Cushman, 25 East Washington Street.

News Notes

—Construction will soon start on a \$100,000 addition to the Municipal Tuberculosis Sanitarium, at Crawford and Bryn Mawr avenues.

—The Madison County Medical Society met at the Alton State Hospital, Alton, August 6, on the invitation of Dr. Joseph H. Ellingsworth, the managing officer, who, with other members of the staff, gave a psychopathic clinic.

—The Chicago Medical Society has arranged to cooperate with the Illinois Bell Telephone Company in providing physicians for emergency calls received over the telephone, and the society desires all its members who will accept such calls as are referred to them through the society's own exchange to send in their name and address, so that they may be registered. The telephone company in the future will refer all these calls to the telephone exchange of the medical society.

—After several years of work to improve the dental welfare service of the state, the Illinois State Dental Society has secured permission to place one of its members on the state board of health; his salary will be paid by the Illinois State Dental Society, the Chicago Dental Society, and from such other sources as care to contribute for the purpose. It is presumed that when the value of this service has been demonstrated, the state will assume the expense. The appointee is Harold L. Freidinger, D.D.S., and he assumed his new duties August 1.

—The Alton Medical Society gave a banquet, July 28, in honor of Dr. Mather Pfeifferberger, who was recently elected president of the Illinois State Medical Society. Dr. Nina P. Merritt, president of the Alton Medical Society, was toastmaster, and the principal speaker was Rev. A. Schwitalla, St. Louis, whose subject was "Idealism in the Practice of Medicine." Among other guests were Lieut.-Col. Ernest G. Bingham, U. S. Army Medical Corps, Jefferson Barracks, Mo.; Dr. Howard W. Barker, commanding officer, U. S. Veterans' Bureau Hospital No. 92, and Dr. Amand Ravold, president of the St. Louis Medical Society.

—The state health director has designated September and October for an intensive cam-

paign against diphtheria in Illinois. He has been assured cooperation from the medical profession, health agencies and civic organizations, and other public persons are requested to assist by broadcasting the knowledge that toxin-antitoxin will immunize children against diphtheria; literature to that effect will be distributed in every city and village in the state. Similar campaigns will be conducted simultaneously throughout North America in accordance with the endorsement of the Conference of State and Provincial Health Authorities of North America.

—The Central Illinois Committee for Mental Hygiene was organized July 13 at Springfield to carry on mental hygiene activities throughout the central part of the state and assist the Illinois Society for Mental Hygiene in state-wide activities by means of conferences, lectures, clinics and other education work; to secure field psychiatrists, social workers and psychologists to cooperate with the state medical society and the state department of health to secure a place on their program for mental hygiene, and to have semi-annual conferences among the various cities represented in the central state territory. Dr. Frank P. Norbury was named honorary chairman, and twenty-five directors are to be appointed.

—The mortality from automobile accidents last year in Illinois was 23 per cent higher than it was in 1924. Automobiles were directly responsible for more deaths than diphtheria, measles, scarlet fever, typhoid and whooping cough combined, which caused a total of 1,530 deaths in the state, while automobiles caused 1,548. The state department of health shows that persons on foot fare worse than those who ride in machines, as far as fatalities are concerned; 833 of those killed were pedestrians. The number of motor vehicles in the state increased more than 30 per cent during 1925, while in the country at large the increase was less than 13 per cent. The health department credits the decline in fatal automobile accidents in New York during 1925 to strict enforcement of a law which involves the revocation of the driver's license, to roads constructed with the safety factor in view, to vigorous patrols, and to carrying in the newspapers the names of persons whose licenses to drive have been revoked.

—The Chicago Nurses' Club and Registry has introduced an "hourly nursing service by grad-

uate registered nurses to supply the demand of those patients who do not need service by the day or week. The charge is \$2.00 for the first hour and \$1.00 for the second or third hour.

—Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following-named places on the dates specified:

At Washington, D. C. Oct. 4, 1926
At Chicago, Ill. Oct. 4, 1926
At New Orleans, La. Oct. 4, 1926
At San Francisco, Cal. Oct. 4, 1926

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

Deaths

VICTOR B. BARCROFT, Litchfield, Ill.; Missouri Medical College, St. Louis, 1879; aged 70; died, July 23, of encephalitis.

JOHN G. AMES, Chicago; University of Maryland School of Medicine, Baltimore, 1881; member of the Illinois State Medical Society; aged 73; died, July 28, at Tulsa, Okla., of angina pectoris.

ISSAC SOMERS BERREY, Batchtown, Ill.; Missouri Medical College, St. Louis, 1882; aged 69; died, July 9, of bulbar paralysis.

WILLIAM POND CUTLER, Highland Park, Ill.; Pulte Medical College, Cincinnati, 1881; aged 67; died, July 31, of heart disease.

JAMES A. DENNEY, Chicago; Physio-Medical Institute, Cincinnati, 1879; aged 69; died, July 20, at Santa Monica, Calif.

ZENAS A. GOING, Chicago; Rush Medical College, Chicago, 1874; member of the Illinois State Medical Society; aged 77; died, July 2, of angina pectoris.

ALMOND M. HILL, Genoa, Ill.; Eclectic Medical Institute, Cincinnati, 1868; Civil War veteran; formerly

mayor of Genoa;; aged 81; died, July 17, of heart disease.

JULIUS HENRY HOELSCHER, Chicago; Chicago Medical College, 1885; a Fellow, A. M. A.; aged 62; died, July 23, at his summer home at Trout Lake, Wis., of heart disease.

JOSEPH A. JENKINS, Joliet, Ill.; Chicago Homeopathic Medical College, 1899; aged 59; died, July 6.

BENJAMIN HARRISON KING, Granite City, Ill.; Barnes Medical College, St. Louis, 1904; president of the Madison County Medical Society; member of the Illinois State Medical Society; aged 46; died, July 31, of cerebral hemorrhage.

WILLIAM ELMER MERCER, Liberty, Ill.; Keokuk Medical College of Physicians and Surgeons, 1906; a Fellow, A. M. A., also a druggist; formerly postmaster of Liberty; aged 48; died, August 2, of heart disease.

FLOYD ARTHUR PINGEE, Elgin, Ill.; Hahnemann Medical College and Hospital, Chicago, 1920; a Fellow, A. M. A.; aged 31; died, July 3, of acute appendicitis.

IDA WRIGHT ROGERS, Chicago; Hahnemann Medical College and Hospital, Chicago, 1884; aged 66; died, July 31, of hypostatic pneumonia.

WILLIAM STOKES STERRETT, Marseilles, Ill.; Rush Medical College, Chicago, 1894; member of the Illinois State Medical Society; aged 59; died, July 28, following a long illness.

Robert G. TIMMS, Chicago; Loyola University School of Medicine, Chicago, 1917; a Fellow, A. M. A.; for five years member of the city health department; aged 47; died in July, of angina pectoris and arteriosclerosis.

CHARLES H. VENN, Chicago; Rush Medical College, Chicago, 1876; formerly professor of anatomy at his alma mater; aged 83; died, July 22, of cerebral hemorrhage and arteriosclerosis.

WILLIAM CHARLES WERMUTH, Chicago; University of Illinois College of Medicine, Chicago, 1889; a Fellow A. M. A.; formerly on the staffs of the Grant, Francis Willard, Passavant and Ravenswood Hospitals; aged 63; died, July 27, of heart disease.

HARRY CLAYTON WILL, Chicago; Northwestern University Medical School, Chicago, 1892; a Fellow, A. M. A.; aged 60; died, August 16, of cerebral hemorrhage.

SAMUEL R. WILSON, Rossville, Ill.; University of Louisville School of Medicine, 1881; aged 67; died, July 4, at the Lakeview Hospital, Danville, of uremia.

SAMUEL M. WYLIE, Paxton, Ill.; Chicago Medical College, 1878; a Fellow, A. M. A.; in 1906 was a delegate from the American Military Surgeons to the International Medical Congress at Lisbon, Portugal, and in 1910 was a delegate from the American Medical Society to the annual meeting of the British Medical Association at London; aged 72; died, July 18, of acute dilatation of the heart.

Illinois Medical Journal

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OAK PARK, ILL., OCTOBER 1926

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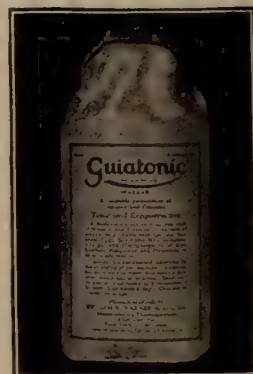
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Editorial

YOUR DUTY TO VOTE

Every loyal physician, whatever his political faith may be, should join in the effort to get out the vote at every election. This is necessary in order that the affairs of the state and nation shall be run by the majority rather than the minority, which is the case at the present time.

Every citizen has not only the right, but also the duty of voting and the doctor especially should be looked up to as a participating citizen, for being a slacker in this matter must give rise to the suspicion that he is not fully informed in, or is culpably careless of his American heritage and his duty to his government obligations which should animate his every action.

Secretary of the Navy Wilbur, speaking before the Christian Endeavor in Pittsburgh on the intelligent use of the ballot, said:

"A fundamental requisite of good citizenship in this country is to vote at every election, always to be counted on to be one of the Government. Don't leave it to others to run the Government. It is your Government. Its troubles are your troubles, and its defects belong to you. Don't roll over on your tongue as a choice morsel the subject of political corruption. . . . No party has a monopoly on honesty. There are dishonest men who claim membership in every party, and seek to control its policies and hold political office by its suffrage. Honest men cannot make politics clean by staying out of politics and by demanding that dishonest politicians be put in jail."

And President Coolidge:

"Popular government is facing one of the difficult phases of the perpetual trial to which it always has been and always will be subjected. It needs the support of every element of patriotism, intelligence and capacity that can be summoned. I am much less concerned for what party, what politics and what candidates you vote than that you shall vote, and that your vote shall represent

your conviction. When an enlightened electorate acts, I have no fear of the result."

A nation-wide "get out the vote" campaign is now well on its way to success. Let the medical profession do its duty towards putting the campaign over. Don't forget to register and vote on November 4.

PHYSICIANS SHOULD TABOO PARTY POLITICS — PARTY LABEL HAS NO MEDICAL SIGNIFICANCE

Doctors should be more patriotic than partisans at elections. Doctors, like all others, should first of all vote as Americans passing upon the issues that come before the American people solely with regard to the question whether they served the highest aims and ideals of Americanism. It is possible in some elections that party and patriotism may appeal to the same loyalty—this is especially true in national affairs. At other elections a strict party vote in some instances can be construed as nothing less than disloyalty to the public as well as to their own profession.

Protection of the health welfare of the people is the duty of the doctor. Medical men must stand together. The organized profession must have a clear cut platform on things medical and must not hesitate to back it whether it is unpalatable to either of the old parties and their candidates. In the new order of things there is no longer to be considered the question of party brand. The slogan for the future should be: *Does the candidate stand for radical medical legislation which is always un-American, destructive alike to the interest of the people and the profession?*

A candidates' views on national issues by no stretch of the imagination can be construed as fitting or unfitting him for office in a municipality or state or for membership in his respective legislature, but it is of vital importance to the people and the profession as to what views he holds on questions like the following:

- State Medicine (medicine degraded);
- Practice of medicine by corporations;
- Practice of and dictation of medicine by laymen;
- National socialization of medicine;
- Compulsory health insurance;
- Practice of medicine by the scientifically uneducated.

All these are issues that reach in every home in the land, issues that enter into the daily life of every man, woman and child and touch every human activity.

THE MATERNITY ACT DICTATES WHAT PHYSICIANS MAY PRACTICE OBSTETRICS AND WHAT HOSPITALS MAY TAKE MATERNITY CASES.

THE REAL PURPOSE OF THE SHEPPARD-TOWNER MATERNITY ACT.

When Congress convenes in December there will be the usual sob-sister lobby in Washington trying to induce members of the House and Senate to vote for an extension for two years of the Sheppard-Towner Act.

As we have said repeatedly the real thinking men of the country see the danger of legislation of the character of the Sheppard-Towner bill and other bolsheviki legislation.

The propaganda put out by the Children's Bureau in advance of the convening of Congress as summarized by the Bureau "is to insure every mother skilled assistance before and during childbirth." The Bureau hopes to accomplish their purpose by several specific measures, the chief one is the iniquitous federal aid scheme.

The scheme desired by the Children's Bureau would give the Bureau the right to dictate what physicians may practice obstetrics, what hospitals may take maternity cases, and would pave the way for an elaborate system of public hospitals under the control of the Children's Bureau at Washington. A more damnable situation cannot be imagined.

The Children's Bureau program contemplates the following:

1. Regulation of the practice of obstetrics by requiring a license to practice from both physicians and midwives, by establishing minimum requirements for obtaining such a license, and by defining and prescribing penalties for malpractice.
2. Regulation of public and private hospitals and maternity homes through legal provisions governing the establishment of such institutions and requiring that they should be licensed and subject to inspection.
3. Legislation for the control of venereal diseases including the making of these diseases reportable.
4. Requiring that puerperal septicemia be made reportable, as is now the case in a number of states.
5. Provision through governmental or public sources of better facilities for training medical and nursing personnel and more adequate clinics, hospitals and maternity homes.

6. Subsidies in aid of state or local activities by federal or state governments, as in the United States during the past four years through the maternity and infancy act.

7. Educational work directed toward informing mothers of the need of adequate maternity care.

As we said in our previous issue maternity legislation is not dead, that attempt is being made to revive interest in the maternity act at the coming session of Congress. The country is being flooded with propaganda from the Children's Bureau at Washington intended to bolster up waning interest in the maternity act. That the propaganda sent out is made up of the most bare-faced falsehoods imaginable.

We are pleased to note that members of Congress and students of economy generally are awake to the dangers of legislation similar to the maternity act. Citizens generally are waking up to a realization that the intent of the act was to give to the federal bureaucrats at Washington control over all state functions and in this particular instance to ultimately bring about general free service to expectant mothers.

THE FUTILITY OF THE NATIONAL MATERNITY ACT

HON. A. PIATT ANDREW
OF MASSACHUSETTS

In the House of Representatives
Monday, April 5, 1926.

The House had under consideration the bill (H. R. 7555) to authorize the extension from five to seven years of the national maternity and infancy act.

Mr. ANDREW: Mr. Speaker, this bill is a perfect example of what happens when Congress sacrifices its better judgment and allows the creation of a new bureau.

In 1913 Congress was asked to establish a bureau of research in the Department of Labor to study the problems of infancy and maternity. Such studies were being carried on in the Public Health Service of the Treasury Department, and there was no need to duplicate that organization in another department. I have before me a number of the pamphlets dealing with maternity and infancy issued by the Public Health Service, and I will read some of their titles: "Breast Feeding Her Baby," "Motherhood," "Bottle Feeding for Babies," "The Summer Care of Infants," "Measles," "Whooping Cough," "The Care of

Your Baby," "Nutrition in Childhood." But Congress was told that it would only cost \$32,000, and there were a lot of persistent agitators, some of them seeking Government employment, and Congress yielded. The Children's Bureau of the Department of Labor was established to duplicate the activities of the Public Health Service, but it only cost \$32,000 for the first year.

Then what happened? Were the agitators now installed in the Children's Bureau content to remain a fact-finding agency, a scientific bureau to do that which the Public Health Service had been doing better than they could ever hope to do? Were they content with the appropriation of \$32,000 per year? Not at all. They wanted to exercise direction and control over the handling of these matters in the States, and some genius among them discovered the possibility of applying to their particular field the 50-50 system which had been used in public-road building. So they came to Congress in 1921 with the argument that if they could have a little money to distribute on a 50-50 basis for a few years, they could educate the backward States in the care of babies and mothers in childbirth.

They only wanted about a million dollars and they only wanted it for five years and by that time their hopes would be realized. Again Congress yielded, and now four years have elapsed, and they are here again and asking for an extension of this appropriation for two years more; but if you will read the hearings, you will discover that this will not mark the end, that they expect to be back in two years more asking for a further extension, and that they are not even willing to admit that their purposes will be accomplished in another five years. Those in charge of the Children's Bureau have no idea of ever abandoning this Federal-aid proposition. Vice President Marshall disclosed the essence of the whole proposition when he said that the trouble with Federal bureaus was that once established the bureau grew and grew until it became a whole bedroom suite. The Children's Bureau, which in 1913 cost \$32,000, today demands an appropriation more than forty times as large.

If you will examine the statistics presented by the Children's Bureau in the hearings as to the rate of infant mortality in the different States, you will discover how thoroughly futile has been

their activity. Five States have refused to accept the 50-50 benefits authorized by this act—Kansas, Illinois, Connecticut, Maine and Massachusetts. The figures furnished by the Children's Bureau do not demonstrate any remarkable results from Federal aid. They show that the highest infant mortality occurs in States that are receiving Federal aid, like Delaware and South Carolina, which are over 10 per cent, and that the infant death rate is considerably below the average in States that have refused the Federal aid, like Kansas, where the rate is only a little over 6 per cent, and Illinois and Connecticut. Statistics would seem to indicate that if you want to preserve the babies you would do well to avoid Federal aid. I hope that Congress will today put an end to this futile extravagance.

TRICKY METHODS USED TO PUT OVER MATERNITY BILL

MATERNITY ACT DEBATED IN SENATE

EFFORT TO SLIP THROUGH SENATE WITHOUT QUORUM OR DEBATE AFTER MORNING HOUR IS DEFEATED BY SENATORS BAYARD, BRUCE, BINGHAM, KING AND REED

SENATOR REED OF MISSOURI RUSHES FROM BARBER'S CHAIR TO STOP SNAP VOTE

"Leaving the barber's chair coatless and collarless, Senator Reed, Democrat, Missouri, rushed into the Senate Chamber today dressing as he went to block the bill to extend Federal maternity aid to States for another year."—*Associated Press*, June 15.

On June 15, "The Maternity Bloc" as Vice-President Dawes once christened it—tried again to use the United States Senate as a rubber stamp for the Children's Bureau.

This Bloc is *always* tricky. It put the Children's Bureau over in 1912 under "suspension of rules" in the House—just as it did the renewal of the Maternity Act, April 5, 1926, in the House. It ran the Maternity Act (final passage) through the Senate without a quorum or roll call, in November, 1921.

It had the stage all set, June 15, for another quorumless Senate grand opening of this million-dollar-a-year "pork barrel" for salaried "humanitarians."

Senators Reed of Missouri and King, known to be strongly opposed, were on the Committee investigating Election Expenses. Senator Bingham of Connecticut, another opposition leader, was supposed to be making a speech to the Sentinels of the Republic in Boston on that day—but didn't go. Senators Reed of Pennsylvania, Green of Vermont, Moses of New Hampshire and Wadsworth of New York were away.

Therefore, shortly after 1:30 p. m., just after "morning business" had closed, just before "unfinished business" was to come up at 2:00, with many opposition Senators away, no quorum in the Senate, a number of Senators at lunch, they tried to rush it through in twenty minutes with Reed of Missouri to be held in a barber's chair for that twenty minutes! But it could not be done!

They were so sharp that the motion wasn't even made by Senator Sheppard—Senatorial stepfather of the Baby Act—but by Senator Jones of Washington.

But Senator King of Utah—who was also supposed to be out, but wasn't—suggested the absence of a quorum. That required a roll call and the Vice-President put the question on Senator Jones' motion to proceed to consider the Maternity Act (House Bill 7555). Senators Bruce and Broussard asked for the yeas and nays and were supported by other opposition Senators, so that there was a roll call on *consideration*.

The result was announced—yeas 51, nays 18, as follows:

Yeas—51: Ashhurst, Bratton, Cameron, Capper, Copeland, Cummins, Curtis, Deneen, Dill, Ernst, Fess, Frazier, Goff, Gooding, Hale, Harreld, Harris, Heflin, Howell, Johnson, Jones (N. Mex.), Jones (Wash.), Kendrick, Keyes, La Follette, McKellar, McMaster, McNary, Mayfield, Metcalf, Neely, Norbeck, Norris, Oddie, Overman, Pine, Robinson (Ind.), Sackett, Schall, Sheppard, Shipstead, Shortridge, Simmons, Stanfield, Steck, Swanson, Trammel, Tyson, Walsh, Watson, Willis.

Nays—18: Bayard, Bingham, Blease, Borah, Broussard, Bruce, Butler, Caraway, Fernald, George, Gillett, King, Means, Pepper, Phipps, Ransdell, Reed (Mo.), Warren.

Not Voting—27: Couzens, Dale, du Pont, Edge, Edwards, Ferris, Fletcher, Gerry, Glass, Greene, Harrison, Lenroot, McKinley, McLean, Moses, Nye, Pittman, Reed (Pa.), Robinson

*The Committee recommended one year, not two.—Editor.

(Ark.), Smith, Smoot, Stephens, Underwood, Wadsworth, Weller, Wheeler, Williams.

The 51 Senators who voted to consider the bill would probably vote for it also, *on passage, if there were no debate*. But evidently the Maternity Bloc itself doesn't believe it could poll a majority after full debate with full attendance—or it wouldn't have tried so hard to dodge debate and quorum on June 15. Also, no further *motion* was made to take up the bill again before adjournment on July 3. On July 1, the bill automatically came up at the evening session, with the Senate working under unanimous consent, but was passed over on request of "several Senators" not named in the Congressional Record.

The bill now goes over until the Senate meets again, November 10, 1926.

EXTRACTS FROM SENATE DEBATE, JUNE 15, ON
MATERNITY ACT

Senator Simmons, D., of North Carolina: I do not know whether the result of this experiment has established the work firmly within the States or not. If it is true that further extension will result in bringing all the States of the Union into cooperation with the Federal Government in carrying on this work, I should consider the amount of money involved as comparatively small.

Senator Bingham, R., Connecticut: Mr. President, before the Senator takes his seat will he be so good as to tell us why he thinks that because a measure is of benefit to the general welfare of citizens, that is a reason why the Federal Government should assume to spend money on behalf of that measure, instead of the States, which originally retained the power to control the general welfare of their own citizens?

Senator Simmons: I do not wish now to go into discussion of that question; the Congress acted upon that question and decided five years ago that this was a wise public policy. I will confess to the Senator that *I know nothing about the details of this work*; but so far as the policy of it is concerned, that has been settled in the past.

Senator King: I want to make a brief statement in reply to the observations just submitted by the Senator from North Carolina. As I understand him, his position is that whenever Congress passes a measure or adopts a policy

crystallized into statute it becomes sacrosanct and must not be changed. This is a most astonishing, indeed an astounding, proposition to be advanced by a Senator. There is nothing sacred in legislation or policies if they are wrong or imprudent or injurious to the people. and if every policy adopted by Congress is to be held as sacred as the Ark of the Covenant, then the decay of democracy is at hand and the day of oppression and autocracy is upon us. The bill now before us is most unwise. It seeks to perpetuate an undemocratic and paternalistic policy which was adopted in a moment of hysteria and as a result of an adroit and subtle propaganda. The bill before us seeks to thrust the Federal Government into the States for the purpose of discharging duties and responsibilities which rest either upon the States or upon the people themselves. It is in line with the hysterical suggestions so often made that the States must be controlled by bureaucracy and that the people are incompetent to govern themselves and must therefore submit to a deadly paternalism or to an omnipotent and tyrannous bureaucracy.

Congress when it passed the measure which it is now proposed shall be continued in force for a further period, enacted that it should exist *for only five years*. But bureaucrats and those who hold jobs under that law propose to do as bureaucrats always seek to do, namely, continue indefinitely temporary organizations and bureaus and policies in order that they may have Federal positions and push the Federal Government into local and State concerns.

But I shall not discuss the bill. I arose only to express my disapproval of the views of the Senator, who argues that because a policy is adopted it must be continued.

Senator Simmons: I did not mean to say, and have not meant to say, that there was anything so sacred in the action of Congress in adopting a policy that it could not be changed. *I have not investigated this question. I know nothing about the details of this legislation. I do not know whether it has been successfully operated or not.* But I said that the committee had said in its report, as I understood it, that two years more were needed in order that the policy might be carried out.*

Senator Reed of Missouri: Mr. President, I wanted to ask the Senator, who said that this bill

was reported by the committee, and that therefore it ought to be passed, if it is not a fact that all the committee but one voted against reporting the bill when it was first up for consideration, and then *the lobby got to work* and changed enough votes to get the bill reported out?

there was a vote in the committee on this bill (committee on Education and Labor): The information obtained by the Senator from Missouri is incorrect. That is not the fact. The committee met more than once for the consideration of this bill and the first vote taken was on the adoption of the amendment cutting down the time to one year, and then a vote was taken on reporting out the bill. The record of the committee will show what the vote was, because a record was kept. I do not recall it at the moment. There was some dissent.

Senator King: Is it not a fact that the overwhelming majority of the committee, *at the beginning of the discussion* and consideration of the bill, were against the bill?

Senator Phipps: *That is correct.*

Senator King: And the Senator knows that there has been a persistent lobby here in favor of this bill, not only now but for a considerable length of time.

Senator Phipps: I would not say a considerable lobby but even if there were, I know it did not affect the attitude of a single member in the committee.

Senator Reed of Missouri: They changed, did they not?

Senator Phipps: Mr. President—

Senator Reed of Missouri: Is it not a fact that there was a vote in the committee on this bill, and that *every member present voted against reporting it except one member*; that that vote was taken at one time?

Senator Phipps: *That may be correct as to the bill in its original form.* Then the proposition came up, I believe, at a later meeting, for the modification of the measure, and that met with favor.

Senator Reed of Missouri: *What was the modification?*

Senator Phipps: *Cutting the time down from two years to one year.* In this connection . . . when the original bill was reported out, and when Senator Kenyon was chairman of that committee, I know *there was considerable difficulty in secur-*

ing a majority report in favor of the bill, and the action in favor of reporting the bill *was definitely based upon the statement that it would be for five years only; that that would be the absolute limit of time, and that it was not expected to be a continuing policy.*

Senator Reed of Missouri: Exactly; and it is not proposed now to have it a continuing policy.

Senator Phipps: No; it is the desire of the committee to cut it off after a reasonable length of time, so that the States may have another year in which to make necessary arrangements to continue their own programs.

Senator Reed of Missouri: It is wholly unnecessary that they have another year to continue their own programs.

The ignorance of the Senator from North Carolina over this bill, which he says he has not considered, is a rare departure from his usual calm and judicial attitude. Generally when he rises to speak on a bill, he knows something about it. He does not stand before the Senate and the country and confess that he does not know anything about the bill. . . . This bill was opposed when it first came on the floor of the Senate, and when it came here it was *about the most monstrous piece of legislation that ever was proposed in this Congress.* As a result of the debate, it was trimmed down to a bill which did not present the enormities of the original proposition, but still was an absolutely unsound measure. That measure has been on the statute books now for nearly five years. It has, in my opinion, never saved a human life, and never done any good to any human being, except the individuals who have drawn the salaries.

Senator Copeland: Mr. President, I shall not at this moment plead for the bill, but I could not let that statement go unchallenged. . . . I do not believe the statement made by the Senator, and do not believe he is in a position to know whether the statement is correct or not.

Senator Reed of Missouri: I suppose the general medical adviser of all the people of the United States, at so much per advice; probably knows.

Senator Jones of New Mexico: Mr. President, I would like to enter my protest against the statement also, because the information I have from the State of New Mexico is quite contrary to what the Senator has stated.

Senator Reed of Missouri: Mr. President, I state it as my opinion, and I state further that I think this organization has been *nothing but a common and public nuisance*, maintained at the expense of the people of the United States. . . .

And now this committee comes here and *admits that this ought not to be a permanent policy*. When the bill was first brought forward we were told that it was a temporary measure. When Senators admitted that it was a temporary measure then they admitted it was a measure *without real merit*. What were they going to do in five years? If they were going to inaugurate some great system of education, it ought not to be stopped at the end of five years. If it was a beneficent thing it ought to be continued. When they put a limit of five years upon the bill or the efficiency of the bill *they admitted that it was not necessary for any permanent reason*, and they failed to show any temporary reasons or to bring forward any evidence that the women who were to be mothers during those five years did not know as well how to take care of their babies as the women who had had babies in the five years previous or the women who might give birth to babies in the five years succeeding. The whole thing was sheer idiocy. They put through the bill *with this limitation because they could not get it through as a permanent policy*, and now it is proposed to add another year *to the life of a thing which they say ought to die*.

Mr. President, I yield the floor. I merely wanted to finish that portion of my statement.

THE PAYROLL BRIGADE IS AGAIN OUT FOR THE SHEPPARD-TOWNER BILL

From time to time we have called attention to the fact that physicians, near physicians, lay health officers, in fact public health and allied officials, what is generally known as the tax-eating brigade with few exceptions have in the past supported the Sheppard-Towner and allied vicious legislation. It is not that the majority of these officials do not recognize the danger of fifty-fifty appropriations, but in the language of one of the high moguls in the fraternity as expressed to me recently to the effect: "I know that Sheppard-Towner and similar legislation will eventually undermine the government, but we public health officials like to see the money.

These appropriations look good to us even if they are wrong in principle."

Below we publish the proceedings of the conference of State and Provincial health authorities of North America. The whole proceeding is illuminating and should prove interesting to people who have to pay the taxes to support such vicious legislation.

Conference of

STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA

August 23, 1926.

To
DR.....
STATE DEPARTMENT OF HEALTH
My Dear Doctor.....

Enclosed are resolutions passed by the Conference which obligates State Health Officers to make special effort to secure continuance of the Federal appropriation for allotment to states until June 30, 1929, as provided by HR 7555 of the provisions of the Sheppard-Towner Act. The existing appropriation provides for allotment until June 30, 1927, only. This bill, HR7555, was introduced in the House of Representatives, January 13, 1926, by Congressman James S. Parker, Chairman of the House Committee of Interstate and Foreign Commerce at the request of the Secretary of Labor with the approval of the President.

The House on April 5 by a vote of 218 to 44 passed the bill, which was reported favorably by the Senate Committee May 3, but with an amendment limiting the appropriation to one year, i. e., to June 30, 1928. Supporters of the bill refused to accept this amendment and insisted that the House bill should be adopted without amendment. The Senate voted on the motion to take up the original bill HR7555 as shown in the enclosed roll call. A vote on the bill was prevented that day, the time having been consumed in discussion. As unfinished business the bill remains on the calendar of the next session of Congress. If favorable vote is secured early enough in the session so that the appropriation is made in time for the State Legislatures to act, our work will not be effected by the carrying of the bill over to the next session.

Now is the time for each State Health Officer interested in the continuance of the appropriation to get in touch with his Senators and about the time Congress convenes to send reminders to them at Washington.

The material enclosed relating to the Minnesota situation is self-explanatory. Dr. S. Marx White, President of the State Board of Health, and the writer, had the opportunity to discuss the Maternity and Infancy program with the Councilors of the State Medical Association in advance of its annual meeting. The subject was not brought up in the House of Delegates. Therefore the action of 1922 when the resolution of the American Medical Association condemning the Sheppard-Towner Act was considered in the House of Delegates and laid on the table still holds. The en-

closed material with certain other references referred to in the list but not enclosed because you are familiar with the items was sent to each member of the House of Delegates and to each Alternate as well as the officers of the Minnesota Association. We feel that there is a better understanding now and expect more active co-operation, although since the beginning of the work there has been no opposition but hearty co-operation from the members of the medical profession.

Respectfully yours,
A. J. CHESLEY, M. D.,
Secretary-Treasurer.

AJC-MS

P. S. Minnesota material being sent under separate cover—not enclosed.

RESOLUTIONS REGARDING SHEPPARD-TOWNER ACT

Conference Proceedings of 1925, Page 139:

"WHEREAS, As a result of the wise administration of the Sheppard-Towner law, the maternal and infant sick and death rates have been materially lowered in many states and it has been definitely shown that the maternal and infant death rates are unnecessarily high in the United States and that they may be reduced by continuing proper administrative public health activities; be it

"Resolved, By the Conference of State and Provincial Health Authorities, that we approve the principle of federal study of maternal and infant health and the establishment and standardization of public health practices and to this end urge upon the President and the Congress the continuation for a term of ten years of these activities made possible by the Sheppard-Towner law. Resolution adopted."

Conference Proceedings of 1926, (Official minutes as yet unprinted):

"WHEREAS, Detailed reports from the 43 states which are jointly co-operating with the Children's Bureau in the care of mothers and babies, under the Sheppard-Towner Law, show definite improvement in maternal and child health and that the recognition of the importance of this movement to the Federal Government has been effective in the same way as it has been for so many years in agricultural and vocational education, in road building and in the eradication of tuberculosis in cattle: therefore

"Be It Resolved by the Conference of State and Provincial Health Authorities of North America that it cordially approves the proposed extension of the Sheppard-Towner Act by Congress; that it records its appreciation of the attitude of the Children's Bureau of the Department of Labor in its effective co-operation with the several states in the approval of individual Health Authorities as most important for these various jurisdictions; and that it pledges its continued efforts to the further reduction of maternal and child morbidity and mortality rates in co-operation with the Federal Government."

This resolution was adopted and the Secretary was instructed to telegraph the resolution to Senator Sheppard and to Miss Grace Abbott of the Federal Children's Bureau, May 21, 1926.

The STATE ADVISORY BOARD on MATERNAL AND INFANT HYGIENE in special session April 6, 1926, adopted by unanimous vote a resolution presented by Dr. L. D. Coffman, as follows:

WHEREAS, There has been no evidence, as alleged or "Federal domination over health matters in which the State is constitutionally supreme," nor evidence indicating that the Federal Board on Maternal and Infant Hygiene or that anyone connected with the Children's Bureau or the Department of Labor has had or now has any intent to attempt such domination; and

WHEREAS, This Board is satisfied that the work of the Division of Child Hygiene of the Minnesota Department of Health, conducted in co-operation with the Federal Children's Bureau, is so planned and carried out as to merit the active support it has received from the medical and nursing professions, school authorities, and all the women's organizations of this State; and

WHEREAS, There is need of a continuance of the present program of the State Department of Health until the counties and cities are able to undertake their full responsibility in the public protection of maternity and infancy under the laws of Minnesota; and

WHEREAS, The functions of the State Advisory Board are as follows:

1. To suggest rules and regulations for adoption by State Board of Health as authorized under Chapter 392, Session Laws of 1921, to carry into effect the provisions of this Act;

2. To pass upon plans of County or District Boards on Maternal and Infant Hygiene;

3. To advise the State Board of Health what assistance be given to county or district boards whose plans are approved;

4. To secure co-operative action through the various agencies represented by the members of the Board in carrying out the provisions of the Federal and State laws on maternal and infant hygiene and to promote the public health and child welfare program in Minnesota.

Be It Resolved that this Board indorse the report of the Committee of Interstate and Foreign Commerce of the House of Representatives, 69th Congress, First Session which recommends the passage of the bill H. R. 7555 to Authorize for the fiscal years ending June 30, 1928 and June 30, 1929, appropriations for carrying out the provisions of the act entitled "An Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy and for other Purposes," and respectfully request the members of Congress from Minnesota to support this measure in the

interest of the health of the mothers and babies of the United States.

- (Signed) L. D. COFFMAN,
Pres., University of Minnesota.
- (Signed) N. O. PEARCE,
Member, N. W. Pediatric Socy.
- (Signed) BLANCHE L. LA DU,
Member, State Board of Control.
- (Signed) RUTH HOULTON,
Pres., Minn. State Organization
for Public Health Nursing.
- (Signed) H. LONGSTREET TAYLOR, M. D.,
Pres., Minn. Public Health Assn.
- (Signed) CELESTE CHAMBERLAIN BAYLISS,
Pres., Minn. Federation Women's
Clubs.
- (Signed) JEAN W. WITTICK,
V. Pres., Minn. League Women
Voters.
- (Signed) MRS. L. A. MCKAY,
Parent-Teachers Assn.
- (Signed) FRED L. ADAIR, M. D.,
Member, Minn. State Medical
Assn.

SENATE

ROLL CALL ON MOTION TO TAKE UP H. R.
7555, MATERNITY AND INFANCY EXTEN-
SION, JUNE 15, 1926, PAGE 11285 OF THE
CONGRESSIONAL RECORD, FIRST
SESSION, 69TH CONGRESS.

51 YEAS

Ashurst, Arizona	McMaster, South Dakota
Bratton, New Mexico	McNary, Oregon
Cameron, Arizona	Mahfeld, Texas
Capper, Kansas	Metcalf, Rhode Island
Copeland, New York	Neely, West Virginia
Cummins, Iowa	Norbeck, South Dakota
Curtis, Kansas	Norris, Nebraska
Deneen, Illinois	Oddie, Nevada
Dill, Washington	Overman, North Carolina
Ernst, Kentucky	Pine, Oklahoma
Fess, Ohio	Robinson, Indiana
Frazier, North Dakota	Sackett, Kentucky
Goff, West Virginia	Schall, Minnesota
Gooding, Idaho	Sheppard, Texas
Hale, Maine	Shipstead, Minnesota
Harrell, Oklahoma	Shortridge, California
Harris, Georgia	Simmons, North Carolina
Heflin, Alabama	Stanfield, Oregon
Howell, Nebraska	Steck
Johnson, California	Swanson, Virginia
Jones, New Mexico	Trammel, Florida
Kendrick, Wyoming	Tyson, Tennessee
Keyes, New Hampshire	Walsh, Montana
LaFollette, Wisconsin	Watson, Indiana
McKellar, Tennessee	Willis, Ohio
Jones, Washington	

18 NAYS

Bayard, Delaware	George, Georgia
Bingham, Connecticut	Gillett, Massachusetts
Blease, South Carolina	King, Utah
Borah, Idaho	Pepper, Pennsylvania
Broussard, Louisiana	Phipps, Colorado
Bruce, Maryland	Means, Colorado
Butler, Massachusetts	Ransdell, Louisiana
Caraway, Arkansas	Reed, Missouri
Fernald, Maine	Warren, Wyoming

27 NOT VOTING

Couzens, Michigan	McKinley, Illinois
Dale, Vermont	McLean, Connecticut
duPont, Delaware	Glass, Virginia
Edge, New Jersey	Moses, New Hampshire
Edwards, New Jersey	Nye
Ferris, Michigan	Pittman, Nevada
Fletcher, Florida	Reed, Pennsylvania
Gerry, Rhode Island	Robinson, Arkansas
Greene, Vermont	Smith, South Carolina
Harrison, Mississippi	Smoot, Texas
Lenroot, Wisconsin	

Stephens, Mississippi
Underwood, Alabama
Wadsworth, New York

Weller, Maryland
Wheeler, Montana
Williams

THE WAY THE CHIROPRACTORS GET LEGISLATION

The chiropractic organization is making herculean effort to procure recognition at the next session of Congress. Our attention has been called to their propaganda in the form of letters sent to chiropractors all over the United States asking individual members of the cult to use their influence with the Congressmen of their respective districts to try and exact a promise that the Congressmen will vote for a bill providing for chiropractic treatment for disabled veterans.

The chiropractic bill is known as Senate Bill 4124, amending 10240. Each chiropractor is urged to send at least five letters naming Senators Reed, Smoot, Richard Ernst, Simmons and George as especially influential members of Congress. As stated above each chiropractor is also asked to write and use his influence with his own State Senator and representatives. The letter states further, "get these letters streaming out of your community—at the rate of fifty to a hundred daily." Also circulate petitions which may be sent to George B. West, Washington, D. C. A paragraph of the chiropractic letter reads, "make chiropractic available to each disabled veteran at government expense." The letter also refers to his satanic majesty as follows: "Satan, the greatest surgeon and dope shooter of all, slices off fifty years from each normal life span. One hundred and twenty years is the age which every man is entitled to hope if he obeys the laws of God and keeps his backbone normal." The letter refers to the physician as "the medical hun who has a strangled holt of the sick and suffering." The letter further says that chiropractic can restore these men who have been pronounced incurable by the medical profession.

The chiropractic propaganda makes two claims, namely, that they have two objections, one for humanitarian treatment of the World War veterans, and the other putting chiropractic on a "secure national basis."

We watch with interest the result of the campaign on our Congressmen. Our best guess is that in Illinois little will be accomplished.

MAY THE STATE VEST THE PHYSICIAN WITH AUTHORITY TO KILL HIS PATIENT?

If the latest in legislation as reported from Denmark is true, then indeed is another stone added to a new Tower of Babel. Like its Biblical predecessor this sacriligious structure may fall and crush the fools that build "not wisely but too well."

This Danish law, stripped of legal verbiage, states the question, "May the State vest the physician with authority to kill his patient?"

Cables state that the proposed law would authorize a physician to put an end to the life of his patient, if in the *judgment of the doctor the patient has no chance for recovery*. The United States has had similar discussions at various intervals of the need for like legislation. A case is pending now in a western state. There might be some excuse for this assumption of near-Divine power, were physicians always right, or always agreed. But, supposing two were called in consultation and one said "Thumbs up," and the other "Thumbs down," what would the poor patient do then?

Oddly enough, too, there are many cases on record when a "man given up to die," even in this materialistic day and age, literally "takes up his bed and walks."

Evidently "there is something rotten in Denmark" if the medical profession has come to the conclusion that it must abandon the time-honored tenet, "while there is life there is hope."

Now, a few weeks ago, the cables were busied with the news that in France there was a movement on foot to enable physicians to create life. Let the profession have all the mundane authority it can get, by all means,—heaven knows the poor doctor earns all he collects—but how does one account for this anthithesis? Except, of course, by the fallibility of human and mortal judgment. This exciting cable told that Voronoff, rival of the late Dr. G. Frank Lydston, had grafted the generative organs of a woman within a chimpanzee, had impregnated these organs with human semen and was awaiting the confinement at "about Christmas time" of the brute, with the expectation of presenting the world with a human being.

Science has much excuse for many things.

Even the martyred ape, the mammal counterpart of the hen who hatches a duck's egg is less culpable than the act of permitting a physician to become an arbitrary and discretionary court of one when it comes to that power over life and death that would seem to belong exclusively to Almighty God, or as the atheists would put it, to the preordained scheme of the universe. God or the universal scheme alone can shorten or take away. Well has it been written, "Such power does not reside in the individual; hence, suicide and invasion upon this divine or fated prerogative is in itself, gravely sinful, or directly against the universal plan, if one prefers to believe in mathematical hypothesis of universal force."

Nor does this prerogative reside in the state. It is true that the state has authority to shorten life, but not an unlimited authority. It may take life lawfully only when the individual upon whom this fate falls is up for punishment for crime and when the commission of his voluntary acts has made him a menace to the citizenry and to the existence of the state itself. Hence the state can exercise this power, "calling upon its citizens to aid in time of insurrection, riot, great public disorders, or war. But the State cannot put a man to death simply because he is sick. Sickness is not a voluntary act and even if its causes have been voluntarily set in motion by the sick man, the resultant ill health is not a condition that can be removed by an act of his will. As the State does not possess the right to shorten or to terminate life, it can not give such a right to any physician, as no individual or entity can give away that which it does not possess. Nor can the patient himself do it. Physicians realize that their mission is to fight death rather than to aid or to bestow it. No law can take away the ancient and durable ideals of the profession. No physician will cast away the ideals of the mother science for the cheap distinction of becoming a murderer. Such a gross blunder will not be made by men of fine minds. And so far is it from their thoughts that doctors can even laugh at jests that link them with the undertaker and the hoary anecdote of the man of God, who, desperately ill, looked up suddenly and recognized in close conference at his bedside, a pair of physicians.

"One more," murmured the sick man, running

his eyes over the two doctors, "one more and I am undone."

WANTED—SPEAKERS FOR THE LAY EDUCATION COMMITTEE

If you know a physician capable of appearing before a lay audience to discuss some phase of health education in clear, non-technical language, will you send his name and address to the Lay Education Committee, 58 East Washington Street, Chicago?

Appointments are now being made by the Bureau up to July 1, 1927. Subjects most in demand are "Health Audits" and "Child Welfare," though "What's New in the World of Medicine" runs a close third from the list of twenty-odd talks which have been used in the state.

Most of the invitations come from woman's clubs, from parent-teacher associations, luncheon clubs and teachers' institutes. A speaker is expected to donate his time three or four times a year and expenses will be borne by the Lay Education Committee. The speaker is always sent outside his own county for the appointments.

Registration has been very generous in the Speakers' Bureau by physicians during the past year, but speakers are not well distributed over the state. This means a waste both of the speaker's time and of the money required for traveling expense when they must be sent long distances.

Following is an informal summary of the methods observed in the technique of our most successful speakers. If you know a man or a woman who can fill these specifications—or better them—let the committee have the advantage of the information.

SUGGESTIONS FOR ALL MEMBERS OF THE SPEAKERS' BUREAU

1. *Be Simple*—When Abraham Lincoln wrote the Gettysburg address he used one-syllable Anglo-Saxon words. "Etiology," "prognosis," "asepsis," and the like are simple as the A B C's to you; to the layman they are as baffling as you would find words accurately descriptive of astronomical phenomena. When a man doesn't understand he is bored. Talk in terms which

represent the least common denominator of what you both know.

2. *Be Personal*—The lack of it irritates your audience in the beginning. The best way to be impersonal is to read a paper. The next best way is to commit a speech to memory. If you are unaccustomed to lay audiences and are afraid you will lose the thread of your argument, write each point in large clear type on an ordinary 3 in. x 5 in. card which may be held inconspicuously in the palm of your hand. Refer to the card openly when you have completed your discussion of one point, then slip it on the bottom of your pile. Never put your notes on sheets of paper.

3. *Be Comfortable*—If your natural standing position is with your hands in your pockets, stand that way when you talk to an audience; if you're a leaner, pick out a chair or a table or the wall and lean with a clear conscience. The important thing is for you to be much more concerned about what you are saying than about the impression you are making. You're all right in your everyday manner or you wouldn't have been asked by the organization to address them. It's only when you get on dress parade that you might be stiff and funny.

4. *Be Clear*—The most important thing is that you should be heard by everybody in the room. This is much more likely to happen if you hold your chin up and talk to the back row. Don't shout. Listen to your own voice and you can keep your tones in your chest and out of your nose and your throat when they are raucous and unpleasant. Enunciate as clearly and deliberately as if you paid a five-dollar forfeit for every word that escaped your hearers. Take your time.

5. *Be Positive*—Except in response to a direct question, never make reference to quack, cultist or irregular practitioner. You can't sell a Rolls-Royce by discussing the disadvantages of a second-hand wheelbarrow. You have an idea to sell which is far more valuable than any piece of merchandise. It would waste your time and energy and magnify the importance of that which you know to be without value if you attack fraud before an audience. A talk which is pro-anything will not be irritating, no matter how much individual auditors may disagree with it. A talk which is anti-anything arouses irritation and defense of the under-dog.

6. *Be Concrete*—Glittering generalities go in one ear and out of the other. Illustrate everything possible from your own experience. Give examples of what you mean. Explain every possible statement.

7. *Be Earnest*—Talk only on the things you believe in with all your heart. A clumsy, zealous, thoroughly earnest speaker will create a far more favorable impression than polished, suave, graceful, eloquent insincerity.

8. *Be Natural*—Modern public speaking discourages eloquence. If you can tell a good story to your friends and they get the point immediately, you can tell a good story to your audience. If not, don't try to be funny in public. It is still worse to be flowery. There are few Patrick Henrys in the medical profession or any other profession and we have no need of them. Your job is to stand on your two feet and tell clearly and with the same authority as if you were speaking to your own patients in your own office a few plain facts on which you are probably the only person in the room who is fitted to talk. It's a good place to cultivate a superiority complex, provided you don't patronize your hearers. It's worse to talk down to them than to talk over their heads. In the latter instance they are merely bored by you and in the first case they actually dislike you.

9. *Be Brief*—There was a certain famous minister who used to say that no souls were saved after the first thirty minutes. Find out exactly what time is allotted to you and stop on the split second. Long-windedness is especially to be guarded against because any medical or health subject you may take is so big you can't possibly discuss it thoroughly in any one talk. Don't try to. Take one phase of one angle of the subject and pound it in. Let them leave you with an appetite for more on the same subject. The exhaustive discussion is usually exhausting.

10. *Be Careful*—Many eminent persons in the field of health education are chiefly distinguished as crepe hangers. Pathological discussions of disease and death defeat the ends of prevention. Folks are more interested in living than in keeping from dying. Remember the fable of the boy who cried, "Wolf, wolf!" when there was no wolf. By the time he had a real warning for his neighbors, they paid no atten-

tion to him. You can't scare folks into doing their duty more than a few times in their lives.

THE CRIMES OF SPEAKERS

- A. Reading a paper.
- B. Being hard to hear.
- C. Affectation and insincerity.

THE ACHIEVEMENTS OF SPEAKERS

- A. Leaving a more friendly feeling for organized medicine in general and the local medical men in particular.
- B. Putting across one piece of accurate useful medical information.
- C. Creating an appetite for more information on the same general subject.

PROGRESS OF THE MEDICAL AND DENTAL ARTS CLUB

ONLY 200 MORE LIFE MEMBERSHIPS NEEDED

Meeting of the Membership Committee, Tuesday, September 28th, 1926.

The Membership Committee called by the President, met at the office of the club at 4:00 o'clock, Tuesday afternoon, September 28, 1926.

The following members were announced as constituting the Membership Committee:

Isaac A. Abt	Geo. H. Mundt
Frederick T. Avery	F. H. Ochsner
Robert A. Black	Wm. R. Parkes
Geo. W. Boot	Nelson M. Percy
Wm. S. Bougher	J. J. Pflock
L. W. Bremerman	N. H. Pierce
John S. Davis	C. H. Searle
N. S. Davis III	Harry J. Smejkal
Morris Fishbein	Robt. Sonnenschein
Erle F. Fisher	Alex F. Stevenson
Gilbert Fitzpatrick	Earl H. Thomas
Edson B. Fowler	Robt. Van Dellen
J. V. Fowler	I. S. Vanderslice
Victor S. Frankenstein	James H. Wallace
Robt. H. Good	S. A. Waterman
John R. Harger	A. Weichelt
Wm. M. Harsha	Olin West
Austin A. Hayden	Chas. J. Whalen
Julius H. Hess	Frank Wright
Max Hubeny	H. H. Kleinpell
Warren Johnson	John S. Nagel
C. B. King	Robert H. Hayes
J. C. Kraft	Frederick R. Green
Phillip H. Kreuscher	Frank Billings
C. H. Lockwood	A. A. Goldsmith
S. J. McNeill	Chas. E. Humiston
Wm. MacKeehey	Hugh N. MacKechnie
Franklin H. Martin	Wm. A. Pusey
K. A. Meyer	Jeremiah H. Walsh
E. C. Morton	

Statements by the president and secretary regarding the membership plan and the present financial condition of the club, were then made and freely discussed. Dr. Pusey presented an abstract of the financial condition showing that it was necessary to sell approximately 200 Life Memberships or their equivalent to complete the financing of the new building. Dr. Mundt stated that experience had taught him that a financial

campaign was more easily handled in a short time than in a long period. He said that this Committee ought to be able to sell 200 memberships in six weeks.

After general discussion, it was moved by Dr. Pusey and seconded by Dr. Walsh that each member of the Membership Committee be requested to see at least five prospective new members and as many more as possible in the next four weeks.

Discussing the Special Societies, the following assignments were made with the request that the members assigned to the Special Society, present subject of membership at the first meeting of the Special Society.

Laryngological—Drs. A. A. Hayden, N. H. Pierce, G. H. Mundt, W. A. Pusey.

Pediatric—Drs. J. S. Van Derslice, Julius Hess.

Dermatological—Dr. W. A. Pusey.

Tuberculosis—Dr. Robert H. Hayes.

Roengenological—Dr. Max Hubeny.

Surgery—Drs. John Harger, H. N. MacKech-nie, N. M. Percy.

Internal Medicine—Dr. N. S. Davis, A. A. Goldsmith.

Urological—Dr. L. W. Bremerman.

As Dr. Pusey brought out in the discussion, it is only necessary to secure 200 more members to complete our financial program. If each member of the Membership Committee can secure

among their friends, three new members, we will fill our quota. This ought to be possible in a short time so that we can complete our membership campaign during October. Your assistance will be of great help in securing this result.

THE FIRST VOLUME OF THE MEDICAL HISTORY OF ILLINOIS IN PRESS

Announcement is made that the first volume of the "History of Medical Practice in Illinois" is in press and will be delivered at an early date.

This is the work compiled by a committee as a monument to medical pioneers and as a commemoration of the seventy-fifth anniversary of the Illinois State Medical Society. This volume carries the history from geologic times up until the year 1850. From 1850 to the current date will be cared for in a later volume. Dr. Lucius Zeuch is the editor of Volume One.

The committee feels that all subscribers will agree that an unusual piece of work, replete with interest and crammed with citations of piquant charm and solid historical value, rests between the covers of this book.

The volume, however, will soon be able to speak for itself.

Every physician, library and county medical society should have a volume of this history. Sold on subscription. Price, \$10.00. Fill in and mail the following order blank.

THE HISTORY OF MEDICAL PRACTICE IN THE STATE OF ILLINOIS
SOLD ON SUBSCRIPTION
AUTHORIZED BY ILLINOIS STATE MEDICAL SOCIETY

To The Committee on Medical History,
Illinois State Medical Society.
Care Cashier.
The Bowmanville National Bank,
4806 North Western Ave. Chicago, Ill.

Please send.....copies of "THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS" by
Express Parcel Post for which I will pay at the rate of Ten Dollars (\$10.00) per copy to address below. Enclosed and
payable to The Illinois State Medical Society History Committee is {Cheque, Money Order, }
{Draft, Express Order} for.....
.....Dollars (\$.....)

Signed

Street No.City or Town.....State.....

Progressive physicians, medical schools, hospitals, libraries, reference and statistical bureaus, and institutions of learning generally will want a copy of this volume as a concise dependable authority for daily use. Unique, comprehensive, and a long wanted unit of historical value, this chronicle of Illinois progress is a record of work done for humanity by the profession. These annals are a bequest of value for posterity; an heirloom for the children relatives and friends of former and present members of the Illinois State Medical Society.

ORDER YOUR COPY TODAY! DON'T LOSE OUT ON THIS!

CHILD HEALTH PROBLEM HELPED TOWARD SOLUTION IN MASSAC COUNTY

The following letter addressed to Dr. Lena K. Sadler, chairman of Public Health and Child Welfare for the Illinois Federation of Women's Clubs gives an interesting angle on the co-operative programs in health education now being conducted by Lay Education Committee of the Illinois State Medical Society in conjunction with the federated clubs.

Mrs. Moseley's enthusiasm is refreshing and her appreciation of the generous attitude of the Massac County medical men is, in its turn, to be appreciated.

If the follow-up on these examinations is conducted with the same vigor as the examinations themselves, Massac County, with its infant death rate of 138.8 contrasted with a state average of 72.51, may have taken the first step toward solving its health problems.

From the educational aspect, the beginning is admirable.

Metropolis, Illinois,
September 29, 1926.

Dr. Lena K. Sadler,
Chairman of Public Health and Child Welfare,
Illinois Federation of Women's Clubs.
Chicago, Illinois.
Dear Dr. Sadler:

I have been busy, so busy that time fails to record its flight. But Hurrah! under separate cover I am sending the cards for every child, white and black, who is enrolled in the four first grades for this year, and also 52 cards of examined children who are under four years of age.

It has been a stupendous task. I have worked, plead, driven, to get it all finished but it is finished. The medical men, Oh! what good sports they have been. Every man of them has helped. They have been so loyal, discouraged at times, but always ready to pull as long as I had hope of putting the campaign across. It has been such good fun to work with them and we all are better friends; teachers, doctors, dentists, nurses, all of us are bigger for having started the biggest program Massac County ever started and finishing it.

When you will have gone through the cards you will see children, some of whom are as high as ten years, but they came from house-boats and

in the slums and have not been to school before so we thought they should be included.

The fifty-two which were examined in conference were children under four years of age. They came to more than one of the conferences but no card is given for a child the second or third time but the same card was used.

I tabulated the results and we found only 12 children out of the 165 who were normal from a medical and dental standpoint. A great many were below par either in the physical or the dental examination. I gave each teacher a list, of the children who were in her room, showing the defects if any, and I think the teacher recognizes the value of the examinations even now as she knows if there is a definite reason for her consideration of one child more than another. The next big task is to get these numerous defects corrected.

It has been a big work, and I was not aware that I should save the newspaper articles until it was most too late so our attached articles does not do any more than give an idea of the many articles we used.

Massac County has heard more of health in the last three months, as it has taken more than three months to accomplish this program, than it has heard in a previous three years, I am sure.

I have enjoyed it all. It has taken much time, every ounce of effort and wonderful, wonderful co-operation to put the program OVER BIG but it is finished to my satisfaction. I wish you might have enjoyed the fellowship between the workers. It has been a thing of wondrous beauty.

Now that Massac County is at the top of the hill, I shall be free to do a wider work.

Yours very sincerely,

(Signed) ELLA K. MOSELEY.

Secretary, 24th District,
Illinois Federation of Women's Clubs.

MEETING OF THE OHIO VALLEY MEDICAL ASSOCIATION

The meeting of the Ohio Valley Medical Association will be held at Louisville, Ky., on November 10 and 11 with headquarters at the Brown Hotel.

The program this year is more varied than ever before, due to the fact that one morning will be taken up entirely by clinic demonstration and operations at the different hospitals. There

will also be more clinics and less didactic lectures.

Respectfully yours,

JUSTICE F. WYNN, M. D.,

712 S. 4th St.,

Evansville, Ind.

EMINENT FOREIGN SPECIALISTS TO COME TO CHICAGO

The Chicago Tuberculosis Institute takes pleasure in announcing that two eminent foreign specialists will come to Chicago as guests of the Institute and will deliver addresses in English.

They are Dr. Ernst Loewenstein, Professor of Experimental Pathology at the University of Vienna, and Dr. Edouard Rist, Co-Director of the Laennec Hospital & Dispensary in Paris.

These physicians, each ranking among the highest tuberculosis authorities in his own country, will be in America to attend the joint meetings of the International Union against Tuberculosis and the National Tuberculosis Association in Washington.

Dr. Rist will be in Chicago, October 9 to 11, and Dr. Lowenstein, October 27. A dinner will be given in honor of each.

Dr. Rist—Dinner at Grayling's, 400 N. Michigan Boul., Monday, October 11, 6:30 P. M. \$1.75 per plate.

Address at City Club, 315 Plymouth Court following dinner under the auspices of the Chicago Tuberculosis Institute with the cooperation of the Institute of Medicine of Chicago.

Dr. Loewenstein—Arrangements will be similar—different dates and places.

Physicians, nurses, and all others interested are cordially invited; there will be no charge except for the dinners.

For further information and reservations, address the Chicago Tuberculosis Institute, 360 N. Michigan Boul., Chicago, Ill. Telephone Central 8316.

INTERNATIONAL POSTGRADUATE MEDICAL COURSES IN BERLIN

International postgraduate medical courses are to be held in Berlin from October 4 till October 30. They will be organized jointly under the medical faculty of the Berlin university; the organization of the Empress Friedrich-Haus, and the assembly of academical lecturers. They consist of:

1. Progressive instructive course on the ad-

vancement of medicine with due regard to the latest therapeutics. October 4-16.

2. Progressive instructive course on the department of urology. 18 to 30.

3. A progressive instructive course on special departments of all branches of medicine, a fortnight from October 18 to 30; and a monthly course from October 4 till October 30.

Detailed information may be obtained from Kaiserin Friedrich-Haus, Berlin, NW 6, Luisenplatz 2-4.

AN IMPORTANT ADVANCE IN THE TREATMENT OF MALARIA

Many references have recently appeared in the literature calling attention to an important advance in the treatment of malaria (including the pernicious tropical forms), which attracted much attention at the recent meeting of the German Congress of Natural Sciences. A number of papers about this new discovery were read at this meeting by several authorities, among whom were Prof. Muehlens of the Hamburg Institute for Tropical Diseases and Prof. Nocht, a member of the Malaria Commission of the League of Nations.

According to preliminary information, the new synthetic anti-malarial remedy (Plasmochin) was discovered by a pupil of Prof. Paul Ehrlich, and was first tested by him on birds infected with malaria. The results were so remarkable that it was tried extensively on human beings in the Balkans by Prof. Muehlens, and also in Italy and Spain. From these observations it appears that Plasmochin is ten times more powerful than quinine and is effective in doses as small as $\frac{1}{3}$ gr. (0.02 gm.). It has a much more destructive effect upon the plasmodium, so that recurrences are less frequent than with quinine. It exerts an almost specific action upon the gametes of pernicious malarial fever. There is no reduction of effect during continued use and hypersensitiveness or idiosyncrasy has not been noted. It can also be given in cases of blackwater fever, in which quinine is ordinarily contraindicated. Plasmochin has a further advantage over quinine in being tasteless.

Plasmochin was discovered in the former Farbenfabriken Laboratories, Leverkusen, Germany, but will be marketed in the United States by the Winthrop Chemical Co., Inc., which has acquired the sole American rights.

Correspondence

COUNTY MEDICAL SOCIETY SECRETARIES

We have just gone over our membership list and have written each county secretary to see if our records correspond with his. We have found that we are carrying the names of many former members who have died within the past year, and whose death was not reported to us.

This naturally causes considerable confusion in our records, as well as quite a little expense to the Society as we continue to send the JOURNAL to the old address until we later find out from some source that the former member has been dead perhaps several months. The same is true in regards to members who have removed from the county or perhaps from the State, and same not reported to us. It will save considerable expense to the Society and help us keep our records in good condition if every county secretary will report each death in his society, as well as removals from the county as soon as possible.

Harold M. Camp, Secretary,
Monmouth, Illinois.

TOXIN-ANTITOXIN CAMPAIGN

To the Editor: During the latter two months of this year, or as soon as plans can be perfected, there will be an intensive campaign started to effect a thorough Diphtheria Immunization of school children throughout the State of Illinois. This is the first time that such a health movement has had so widespread an interest. Behind this movement are not only our own Health Department and Medical Profession, but also the Dental Profession, through the Illinois Dental Society, the Parent-Teachers' Association and the Federated Women's Clubs of Illinois.

It is planned to give this campaign publicity largely through lay organizations and it is suggested that physicians throughout the State acquaint themselves with and be prepared for requests to administer toxin-antitoxin when called upon by patients to do so. Our co-operation is necessary. We have wonderful support from our largest lay organizations. Educational Health Circular No. 4 of our Health Department explains the matter in detail.

The State is planning to furnish toxin-anti-

toxin in quantities of three or more immunizations if given at one time. Diphtheria should be, and can be made, an obsolete disease. Let us help make it so.

B. V. McCLANAHAN,
Member, Advisory Committee.

OLD VOLUMES OF THE JOURNAL WANTED

Monmouth, Ill., Oct. 4, 1926.

To the Editor: I am in receipt of a letter from the American College of Surgeons, written by Doctor Franklin H. Martin, asking if it would be possible for us to furnish a copy of the transactions of the Illinois State Medical Society for the years 1883, 1888, 1889 and 1892. Of course, I do not have any extra copies of the above. I wonder if you know of any place where same might be procured. You might report either to Doctor Martin or to me and I will send the information to him.

With kind personal regards, I am

Yours very truly,

H. M. CAMP, Secretary,
Illinois State Medical Society.

HMC-EH

LIGHT ON THE SHEPPARD-TOWNER SITUATION. ILLINOIS FEDERATION OF WOMEN'S CLUBS

Chicago, September 27, 1926.

To the Editor: I wish to thank you, Dr. Whalen, for your article in the last JOURNAL on the Sheppard-Towner situation.

You have given me a view of it that really hadn't registered with me before, particularly the fact of the bill being wholly under the Labor Department at Washington and being functioned throughout the states through the Health Departments.

I wish it were possible to send a marked copy to each member of the Board of the Illinois Federation of Women's Clubs. There are fifty of them. Have you that many to spare? or if you have twenty-five, I will make a careful selection of a mailing list which I will send you. Will you kindly let me know how many I can depend upon?

LENA K. SADLER, M. D.

State Chairman of Public Health & Child Welfare, Illinois Federation of Women's Clubs.

Illinois State Medical Society

OFFICIAL MINUTES OF THE SEVENTY-SIXTH ANNUAL MEETING*

HOUSE OF DELEGATES

Champaign, May 18, 1926

The first meeting of the House of Delegates was called to order at 9:27 P. M., May 18, 1926, by the President, Dr. Jacob Krafft.

The President: I will ask the Secretary to call the roll.

The Secretary called the roll and announced that a quorum was present. There were 60 delegates from down state and 40 from Cook County.

The President: The first order of business will be the reading of the minutes of the last meeting.

Dr. J. W. Van Derslice, Chicago: I move that the minutes of the last meeting as published in the July, 1925, issue of the JOURNAL be accepted as the official minutes. (Motion seconded and carried.)

The President: We will now have the Secretary's report.

To the House of Delegates:

Your secretary reports the collection of the following sums for the balance of the year 1925 and the first four months of 1926. The first figure read being from May 1, 1925, to December 31, 1925, and the second from January 1, 1926 to April 30, 1926.

	1925	1926
Adams	\$ 0.00	\$ 560.00
Alexander	10.00	0.00
Bond	0.00	0.00
Boone	5.00	88.00
Bureau	55.00	165.00
Carroll	90.00	5.00
Cass	5.00	20.00
Champaign	20.00	624.00
Chicago Medical Society.....	3,330.00	18,765.00
Christian	85.00	205.00
Crawford	45.00	0.00
Clark	20.00	48.00
Coles-Cumberland	10.00	288.00
Clay	70.00	40.00
Clinton	55.00	0.00
Dekalb	65.00	176.00
Dewitt	0.00	96.00
Douglass	20.00	109.00
DuPage	175.00	15.00
Edwards	0.00	40.00
Edgar	20.00	138.00
Effingham	25.00	0.00
Fayette	0.00	32.00
Ford	10.00	88.00
Franklin	55.00	20.00
Fulton	135.00	288.00
Gallatin	5.00	48.00
Greene	2.50	176.00
Hamilton	20.00	24.00
Hardin	0.00	0.00
Hancock	10.00	104.00
Henry	210.00	5.00
Henderson	35.00	5.00
Iroquis	0.00	218.00
Jackson	50.00	215.00
Jasper	60.00	69.00
Jefferson	5.00	168.00

*Inasmuch as there were some corrections necessary in the minutes of the House of Delegates as published in the July issue, it has been deemed advisable to publish a revised copy.

	1925	1926
Jersey	35.00	0.00
Jo Daviess	55.00	0.00
Johnson	10.00	0.00
Kane	560.00	838.00
Kankakee	15.00	328.00
Kendall	0.00	40.00
Knox	95.00	294.00
Lake	0.00	0.00
LaSalle	358.00	0.00
Lawrence	20.00	0.00
Lee	65.00	160.00
Livingston	195.00	0.00
Logan	150.00	162.00
McDonough	129.00	103.00
McHenry	125.00	0.00
McLean	110.00	354.00
Macon	435.00	10.00
Macoupin	27.50	110.00
Madison	24.00	736.00
Marion	60.00	183.00
Massac	5.00	0.00
Mason	70.00	13.00
Menard	20.00	31.00
Mercer	0.00	48.00
Monroe	30.00	0.00
Montgomery	0.00	196.00
Morgan	75.00	364.00
Moultrie	0.00	0.00
Ogle	113.00	18.00
Peoria	395.00	538.00
Perry	105.00	154.00
Piatt	40.00	106.00
Pike	97.50	122.00
Pulaski	40.00	48.00
Randolph	20.00	144.00
Richland	0.00	16.00
Rock Island	35.00	466.00
St. Clair	555.00	0.00
Sangamon	60.00	778.00
Schuyler	0.00	80.00
Scott	0.00	0.00
Shelby	15.00	61.00
Saline	60.00	0.00
Stark	0.00	0.00
Stephenson	15.00	288.00
Tazewell	65.00	5.00
Union	5.00	104.00
Vermilion	55.00	481.00
Wabash	60.00	0.00
Warren	35.00	0.00
Wayne	75.00	0.00
Washington	0.00	114.00
White	75.00	0.00
Whiteside	145.00	5.00
Will-Grundy	35.00	5.00
Winnebago	470.00	0.00
Woodford	15.00	112.00
Williamson	15.00	254.00
Subscriptions	114.50	78.00
Exhibits	1,032.50	942.50
Lay-education	10.00	0.00
Total	\$11,128.50	\$31,701.50

The figures reported as May to December, when added to the receipts reported to the 1925 House of Delegates, covering the first four months of 1925, make the total for the entire year of 1925:

Receipts from county societies.....	\$32,991.50
Subscriptions	233.50
Exhibits	1,877.50
	\$32,102.50

From May 1, 1925, to May 1, 1926, a total of 253 voucher checks were issued for \$61,177.35. These were divided as follows:

General Expense	\$33,973.27
Medico-Legal Expense	9,857.87
Legislative Expense	4,695.72
Lay Education	12,650.69
	\$61,177.55

Of the general expense, the sum of \$13,940.74 was spent for the printing of the JOURNAL during the year.

Members in good standing May 1, 1925.. 6,577
Members dropped

By death	68	
Non-payment and removals	244	
	<hr/>	
	312	312
		<hr/>
		6,265
New members	541	
Reinstated	88	
	<hr/>	
	629	629
		<hr/>
Membership May 4, 1926.....	6,894	

This shows a gain of 317 in membership during the fiscal year.

An audit of the Secretary's and Treasurer's accounts for the past year, ending May 1, 1925, was made by Fred N. Setterdahl Company of Rock Island, Illinois, and reported to the Council in September, 1925. The auditors verified the reports of the Secretary and treasurer, as reported to the House of Delegates in Quincy last year, showing the same to be correct.

It is the opinion of your Secretary that the increase in dues made last year by the House of Delegates was entirely necessary and he believes that the annual dues should remain \$8.00 per member for the next fiscal year.

The work of the Lay Education Committee is no longer an experiment and its necessity is shown by the results obtained through the work accomplished. The five basic principles or aims of the committee have been carefully outlined and positive results have been obtained. These aims are:

1. To teach the meaning and necessity of the single standard of medical education.
2. To teach preventive medicine toward which we believe the periodic health examination, medical and dental, is the single greatest step.
3. To achieve a high degree of efficient team-work in health programs with all agencies interested in any phase of the same.
4. To establish in community activities, scientific medical leadership of all lay movements for health.
5. To hold back in every way possible State Medicine in every form and prevent all legislation toward that end—this being done through the component societies assuming the community responsibilities for public health.

Among the many state medical societies in our country, the Illinois State Medical Society is considered the pioneer in this form of educational work, and many of them are now attempting in some way to formulate their own programs. It is the opinion of your Secretary that the work should continue, especially along the lines already adopted by our most efficient committee.

In closing, I wish to take this opportunity of thanking the many secretaries of our component societies for the fine spirit of cooperation shown during the past year and again wish to emphasize that we should all realize that the County Medical Society is the real basic unit of all medical organization and that we should all endeavor to not only retain our membership

but to gradually increase it until every eligible and reputable physician in Illinois will be enrolled on our membership list.

Respectfully submitted,

HAROLD M. CAMP,
Secretary.

Dr. E. E. Perisho, Streator: I move that the report be adopted. (Motion seconded and carried.)

The President: We will now have the report of the Treasurer.

TREASURER'S REPORT

Dr. A. J. Markley, Treasurer.

For period of May 16, 1925 to May 15, 1926.

	General Fund	History	Medico-Legal	Legislative
Balance May 16, 1925	\$22,344.95	\$311.28	\$ 8,243.40	\$ 5,867.23
Received from Secretary	22,544.31	.....	12,178.09	8,107.60
Received from Journal	15,500.00	.....	.....	.....
Total	\$60,389.26	\$311.28	\$20,421.49	\$13,974.83
Disbursements				
Vouchers cashed...	48,436.46	116.00	9,857.87	4,929.21
Balance on hand...	11,952.80	\$195.28	\$10,563.62	\$ 9,045.62

Dr. J. S. Nagel, Chicago: I move that the report be received. (Motion seconded and carried.)

The President: The next order of business is the report of the Chairman of the Council.

REPORT OF CHAIRMAN OF COUNCIL

DR. W. D. CHAPMAN: The Council regrets to report the death of one of its members during the year. Shortly after the 1925 meeting Dr. M. P. Parrish, who had been elected a member of the Council at this meeting, passed away.

The Council has had a full and active year. In very many ways during the past year there have come to fruition several of the hopes for which we have worked. The standing of our State Society at the present time in the public mind seems to be better than at any time during the past several years and indeed we have been active in combating several measures which seemed inimical to the medical profession. The policies of the Council have been exactly in consonance with the policies laid down by the Society in the past year. The methods of applying these policies have been brought down to date and changes have been minor except in the matter of co-ordinating the different agencies. This year's Council has been able to coordinate the activities of its several committees and we find the work of the Lay Education Committee and the Council as a whole coordinating much better and dovetailing more closely than has been the case in the past. We have made some mistakes but we hope these are not serious. The Council is open to suggestions and desires help.

Six meetings were held during the year between the 1925 session of the House of Delegates and the present one. Routine business proceeded without unusual occurrence. During the year some arrangement by which Grundy and Kendall counties might be able to work

with the Third District seemed desirable. That arrangement was made by the Council with the agreement of the counties concerned. Along that line of districting, it has seemed to the Council that the time has come when it would be wise to create a new district, the Tenth, to be made up of the counties that now comprise the Ninth District. That district at present contains twenty-three counties. The House will hear about this more fully from the Councilor of the Ninth District.

The increase in dues which was allowed by the 1925 House of Delegates has been apportioned between the work of the three committees, Lay Education, Medico-Legal and Legislative. In each of these committees there has been a need of an increased supply of funds and it has seemed to the Council at the present time that the supply is adequate.

One policy of the Council which might be described as new has been the institution and adoption of postgraduate service for the county societies. That service is growing in capacity and in popularity. The Council through its postgraduate service committee in co-operation with the Lay Education Committee is desirous of seeing it extensively used by the county societies for the coming year.

At one time during the year the time seemed right to institute activities relative to some method of handling the abuse of expert medical witnesses in our courts. The Council initiated a resolution which seems to be bearing fruit. We have heard several times since that the resolution was adopted by other institutions and is in active practice in courts of law.

The Council recommends the institution of another scientific section.

For the rest of the work of the Council it has been largely a year of harvesting of the efforts of past years.

For the future the Council recommends the continuation of the policy which has made much work for the Council and Secretary in the past, the handling of all State Medical activities. One of these activities was mentioned by Dr. Neal in the Secretaries' Conference this morning. I hope each one will read it when it appears in the JOURNAL. That one had to do with the law which was passed by the National Congress in 1923 which provided at government expense free treatment for any ailment which occurs now or in the future in any veteran who was in any engagement, military or naval, since 1917. To most of us that would look like class legislation; if from 1917 why not for all veterans? As it stands at the present time the Government of the United States will be willing and does offer medical care of any nature whatever to any veteran who comes within this certain specified class. That is state medicine. There are about four million veterans coming within that class and there is good reason to expect that the time will come when that might have a serious effect economically on the members of the medical profession at large. There are other phases of state medicine activities which will continue to come before the Society and to which it is the honest wish of the Council

that members of the Society be definitely and fully aware of at all times, particularly with the present minor legislative annoyances concerning which the Legislative Committee will report more fully, continuing to be with us. Just now one in particular upon which the Council recommends a resolution by the Resolutions Committee has to do with the further restrictions upon the Federal Narcotic Law, which in the past has caused annoyance for members of the medical profession and which as now proposed will make additional hardships.

The matter of lay health officers has been before the Council all during the year and will be for the next year. It is advisable and the Council certainly urges that every member of this House and every member of the State Medical Society keep himself fully informed of the progress of the work of lay health officers in the United States. As you know, some institutions are educating students and giving them a degree of Doctor of Public Health. We should do our utmost to combat this movement. The American Public Health Association is largely responsible for this.

It is a pleasure to report that during the past year the Society has been informed by the American Medical Association that the last apportionment entitles us to two additional delegates. That means increased membership and is gratifying because it means increased representation in the American Medical Association's House of Delegates, where the Illinois delegates have for several years past taken an active part, and have at times wielded the balance of power.

Dr. J. W. VAN DERSLICE, Chicago: I want to add something to the Council's report. In every debate on the American Medical Association floor the Illinois delegation has cast the deciding vote in the last four years. We have not voted on the losing side in the last three years.

(It was moved that the report be adopted. Motion seconded and carried.)

REPORT OF THE COUNCILORS

1. Dr. D. B. Penniman, Rockford, reported for the First District as follows:

I have the pleasure to report that the First District is in splendid condition. Every county society is functioning. We have several small county societies which are not able to hold as many meetings as the larger societies. There will be meetings at which not more than two or three doctors are present, but even these smaller districts have at least two meetings a year. One of our societies had a splendid program last fall to which they invited the neighboring doctors and there were 240 registered at the meeting. The other societies have done very well. The plan of having three or four meetings, of having a luncheon, a good social time and a good scientific meeting has contributed largely to the attendance.

2. Dr. E. E. Perisho, Streator, reported for the Second District as follows:

Six of the counties are well organized and doing good work. We have four counties in this District which, because of their location with only a few doctors in each town, have been unable to keep organized. Two of these are Marshall and Putnam. They have asked to join with Peoria or LaSalle. Most of these doctors go to either of these places to meetings. Kendall and Grundy have asked to join with Will County to which they are associated very closely. We have given them permission to do this and we have also transferred them to the Third District. My policy is to keep all the different counties well informed as to the work of the Council and of the doings of the State Medical Society. I have visited almost all of the counties the past year and I keep in communication with them. I keep them informed of the legislative work that is being done. Every one of them has been very faithful to report on the legislative work. I think Dr. Neal will agree with me that my district is fairly well organized in a legislative way. The recent primary campaign was better than previous ones. Almost all of our members welcome the increased fee for dues and I have heard no complaint. They are also very enthusiastic about the lay educational work. Most of the counties have made use of the speakers, so everything is working well in the Second District.

3. Dr. S. J. McNeill, Chicago, reported for the Third District as follows:

The Third District is composed of Lake, DuPage, Will, Kendall, Grundy, Kane and Cook Counties. Will, Grundy and Kendall Counties report a very successful year. Kendall County has a membership of 43 active members, 8 non-members who should be members. They meet every month excepting during July, August and September. They also have a club in connection with the County Society which is very good and which increases the membership.

DuPage County has a membership of 50 and they report 100 per cent. attendance. This seems to be about the most lively society outside of Cook County. They have had 122 meetings since 1919. On account of Grundy and Kendall Counties having a small membership they ask to be associated with Will County. This permission was granted. Lake County has been very inactive in the last year. They have had two or three malpractice suits. They have a membership of 49 but only had three meetings during the year. There will have to be some missionary work done there. What the cause of this lack of attendance and enthusiasm is I have been unable to find out.

The Chicago Medical Society has the largest membership this year that it has ever had, about 4,000. We have taken in this year a little over 300 new members. We have had a number of deaths. I think the Chicago Medical Society has done more work this year than ever before. We have 15 branch societies that meet once a month. The Central Society meets every week except during July, August and September. The Council of the Chicago Medical So-

ciety takes care of all the business that is transacted. It meets once a month.

4. Dr. W. D. Chapman, Silvis, reported for the Fourth District as follows:

The Fourth District can duplicate the reports that have been made for the other districts. We have some societies which are active and others which meet only once during the year. That with some of us is a source of regret and we are endeavoring to stimulate activity in those societies to the point where the meetings will become more frequent. There are other things which might be reported but they are of lesser importance.

5. Dr. S. E. Munson, Springfield, reported for the Fifth District as follows:

I have visited all the counties in my District. This being my first year in the Fifth District I thought the better way to find out some of my responsibilities and duties was to call upon the men and talk over their problems and see how they were functioning as a scientific body and also toward the public welfare work in their community, as well as their attitude toward the public welfare work laid out by our Lay Education Committee. Two things we have endeavored to stimulate in these organizations; one, increased membership and the other, cooperation or coordination for the main good. I think the best way of keeping down discord and ill feeling in a county medical society is by the men working together. I find that the men in my district are interested in this. I have a definite report on the eligible doctors in my District who are not members. I think with a little work this list can be reduced considerably.

DeWitt County—Licensed physicians in county (as per directory) 22
Number members in County Society..... 14

A meeting of the DeWitt County Medical Society was held at Clinton, May 7, with a dinner at noon. Almost every member was present. This society is fortunate in having one of its members as the mayor and another as president of the school board.

A request by the Parent-Teachers' Association of Waynesville to the State Board of Public Health to send someone to examine the school children was brought to the attention of your councilor after the matter had been referred to Miss Keller. After a great deal of effort and correspondence it was successfully accomplished during the week of May 3 by the physicians of Waynesville, with the assistance of the DeWitt County Medical Society. The society was complimented on account of this achievement.

There should be more intense organization by the society, with more frequent meetings, that greater progress may be made along scientific lines and welfare work in the community. This is a society with splendid opportunities and capable of doing very excellent work.

Ford County—Licensed physicians in county (as per directory) 23
Number members in County Society..... 17

On May 7, after a dinner, a talk was made to the members of the Ford County Medical Society. This

is one of the counties with a small membership. It is in need of more frequent meetings to create greater scientific interest, as well as meeting the problems of lay education work in this community.

One of the members of this County Society, located at Melvin (Dr. Boshell had examined the school children from nine country districts. This is certainly a very creditable piece of lay education work done by this member.

The school children at Gibson City were examined by a physician and nurse sent by Dr. Rawlings, at the request of the local men. Dr. H. W. Trigger, the secretary of the society, is deeply interested in the work of his society and with his efforts no doubt much will be accomplished in the coming year.

Iroquois County—Licensed physicians in county (as per directory) 46
Number members in County Society..... 17

An invitation was extended to your councilor by the Iroquois County Medical Society to a dinner given by Dr. Buckner, of Gilman, on July 23, 1925, with the members of the society as his guests. Dr. J. R. Neal was present and his talk along legislative lines was well received. Dr. Buckner is certainly a fine host and the society put over a splendid scientific program—subject, "Focal Infection."

Logan County—Licensed physicians in county (as per directory) 42
Number members in County Society..... 28

Logan County Medical Society was visited on April 29. Seventeen members were present. Splendid interest was manifested in the work of the Lay Education Campaign and also in the legislative work as presented by Dr. J. R. Neal, who made a very able talk on this subject.

This society is very active in lay education work and has given assistance to other towns in the county in work of this kind, as well as the Baby Conference held at Atlanta during their county fair last fall.

We had a fine dinner and a cordial reception at this excellent meeting. This is certainly one of the live societies in the Fifth District.

Mason County—Licensed physicians in county (as per directory) 19
Number members in County Society..... 15

The councilor visited a meeting of the Mason County Medical Society at Easton, on May 3, accompanied by Dr. J. R. Neal and Dr. Isaac D. Rawlings. There was a very good attendance. There are fifteen members in this society, this being one of the small counties in the district, with only nineteen licensed physicians, which includes about all the eligibles in the county.

The matter of the Baby Conference, sponsored by the Woman's Club at Mason City, is considered for the County Fair this year. After a talk along the lines of lay education work, there was a general discussion of the members in regard to their attitude toward public welfare opportunities:

Dr. Neal and Dr. Rawlings were met with a cordial

reception and made talks along the lines of medical organization, legislation and preventive medicine.

With more frequent meetings and closer cooperation this society will be well prepared to meet the responsibilities in lay education work in Mason County.

McLean County—Licensed physicians in county (as per directory) 107
Number members in County Society..... 75

By invitation of the McLean County Medical Society, your councilor, accompanied by Dr. Isaac D. Rawlings, attended their meeting of November 17. The meeting was well attended and an interesting paper was read by Dr. Harold M. Camp, Secretary of the State Society. The problems of the lay education work was discussed, after which Dr. Rawlings made a very good talk on preventive medicine.

The Society is fortunate in having a very capable and aggressive secretary in the person of Dr. P. E. Greenleaf, who is well informed, as I have found by correspondence, in the lay education work in his community. This is a strong society, able to meet the problems of lay education work in their community, with interesting scientific programs.

Menard County—Licensed physicians in County (as per directory) 14
Number members in County Society..... 8

Menard County Medical Society was visited on April 30. Five members were present. There are only eight members in this society. Two or three members in this county, just over the line of Sangamon County, have affiliated with the Sangamon County Medical Society some years ago.

The subject of the Lay Education Campaign was presented by your Councilor, as to the examination of the pre-school child, the examinations of the school children, and the adult health examinations. Also reorganizing the men in this county that they may be better fitted to care for the work outlined by the Lay Education Committee in this community. There was much interest manifested and promise of endeavor along this line. Dr. J. R. Neal explained the legislative problems and asked for their co-operation.

Sangamon County—Licensed physicians in County (as per directory) 127
Number members in County Society..... 103

This Society has regular monthly meetings, with interesting scientific programs and good attendance. The Society has had a splendid spirit of co-operation in meeting its lay education work. Last fall at the State Fair four thousand adult health examinations were made, and assistance was given the State in the Baby Conference.

During the meeting of the Illinois State Dental Society at Springfield, members of the Sangamon County Medical Society devoted a half day to the examination of the members of the dental profession as part of the work of the lay education program of the Dental Society. Much time and effort was given in the preparation of this work by the officers of the Sangamon County Medical Society and their committee.

Tazewell County—Licensed physicians in County (as per directory)	41
Number members in County Society.....	23

Tazewell County Medical Society was visited by your Councilor, accompanied by Dr. J. R. Neal, on May 11. A dinner was served with small attendance. On account of the close proximity of this Society to Peoria, the attendance has not been good. Lay education work in the community and organization was discussed, with a very timely talk by Dr. Neal.

With the interest manifested by the President and Secretary, this Society, with more co-operative effort from each of its members, should be able to have more frequent meetings with good scientific programs, and success in carrying out the welfare work of the community.

S. E. MUNSON, *Councilor*.
Fifth District Illinois State
Medical Society.

6. Dr. H. P. Beirne, Quincy:

(No report was received from the Sixth District.)

7. Dr. I. H. Neece, Decatur, reported for the Seventh District as follows:

As the Chairman of the Council has said, I am filling the unexpired term of the late Dr. M. P. Parrish, and am the junior member of the Council. The twelve counties which make up the Seventh District are in good condition. There have been but two counties in the District that have not had regular meetings. We are doing our best to bring them around where they will meet regularly. I hope next year we can furnish a better report on the counties which have not fallen in line with the work of the State Society.

8. Dr. G. B. Dudley, Charleston, reported for the Eighth District as follows:

The Eighth District contains eleven counties with eight component societies. Every society is functioning. Membership ranges from 12 to 100 and the meetings vary from four to twelve per year. One society is having a definite program for the whole year and following a definite course of study. The membership remains about the same. There has been little gain and no apparent loss. So far as the raise in dues is concerned, I have heard very little criticism and no destructive criticism. I think the district on the whole is in very good condition.

9. Dr. Andy Hall, Mt. Vernon, reported for the Ninth District as follows:

The Ninth District is composed of 23 counties in the southern end of the state. I have not visited all the counties, but I have visited ten, including Herrin, in bloody Williamson County. I have kept in communication with the secretaries of the other counties. There are two counties in the District that have no society. One county has only four active physicians and the other has only six.

Most of the counties are functioning fairly well. In some of the counties practically every man in active practice and eligible is a member of his society. In Perry County Dr. Templeton reports 19 active physi-

cians and 19 members in good standing. In my county, Jefferson, we have 25 members which includes all the active members of the profession. And we have had 11 meetings during the past year with an average attendance of 35.

In the Ninth District from the east line to the west line it is 150 miles and it is practically 150 miles from the north to the south end of the District, so it is practically impossible for a man in active practice to visit all the counties in that district and keep in touch with business at home as it would require two days and a night from home to visit some of these counties. For that reason I have recommended to the Council that the Ninth District be divided into two districts, making an additional Tenth District. This new District should include St. Clair, Washington, Perry, Jackson, Union, Pulaski, Alexander, Randolph and Monroe Counties. This would still leave the Ninth District with 13 counties which is more than contained in any other Councilor District.

(It was moved that the report of the Councilors be accepted. Motion seconded and carried.)

The President: The next order of business will be the report of the Editor of the JOURNAL, Dr. Charles J. Whalen, Chicago.

REPORT OF THE EDITOR

With pleasure the editor reports that the ILLINOIS MEDICAL JOURNAL completes at this annual meeting the most prosperous and successful year of its existence.

An increase of approximately three hundred per cent. in the revenue and general activities of the JOURNAL has been achieved within the last few years. Great as has been the effort to attain this end the results more than justify the labors of those who have made possible this triumph. Today the sphere of the ILLINOIS MEDICAL JOURNAL is world-wide.

Additional responsibilities and a larger operative cost have come with this enlargement of the scope and power of the periodical.

A point of satisfaction to the editor and of gratification to members of the Illinois State Medical Society is knowledge that the policies and issues fought for so energetically and for so long a time by the editor have been adopted by practically all of our great statesmen and by every medical organization throughout the United States.

A point of anxiety at present is fear a lack of public appreciation of the ever present danger may lead the optimists among us to feel that the fight is won. The struggle is only in the beginning. The one weapon upon which we may rely to win the fight is organization on the part of the profession to the ultimate degree. This assembling of a unit with which to make ballot-box protest against the lay dictation of the practice of medicine will result in immediate relief to the profession and to the public welfare—both financial and ethical. Taxes will be lightened and hampering legislation removed.

Over-centralized government, against which this mag-

azine has fought for years, is now recognized as the wolf at the door by our keenest statesmen. Other objects of protest on the part of this magazine and its editor have been and are the principles involved in the dangerous Sheppard-Towner and similar legislation, the State Medicine menace, lay dictation of medical practice, the practice of medicine by lay corporations, a double standard for medical licensure. And each and every one of these items is recognized now as a burning question and pivotal issue by the thinking men of the country.

More than a decade ago insidious danger of menacing propaganda threatening the practice of medicine was recognized by your editor and denounced vigorously in the columns of the JOURNAL.

National demand for information on economic subjects treated editorially in the JOURNAL is resulting in constant demands for reprints of these articles. Within the last few years this demand has shown a rapid rate of increase—in fact one difficult to believe, almost.

Men and women of affairs realize as never before how the health welfare of the people affects the prosperity of a nation and its world outlook.

Because of this new clarity of vision the public sees that medical economics is fundamentally one with general economics.

Many of our present troubles have sprung, as the editor views it, from a great lack of that wider vision that sees medicine in its general relation.

Coupled with the lack even of desire for that vision problems of medicine have not risen in the public mind as the clearing house for science and service and civics.

Despite improvement in the economic eye of the profession and of the general public, the point of refraction is still askew. The danger line is not yet passed. The profession must realize that the scepter of dominion in the field of medicine will be wrested away unless a more vigorous attitude is taken in regard to the solving of current medical problems. These issues that may seem on the surface to be the private concern of the state or of the individual are in reality the first concern of the physician as only too fortunately many of us have discovered.

One of these problems that must be "met and fought with outright" is the health welfare masquerade. Lay organizations and "47 varieties" of near doctors are attempting to perform a large portion of health work that has been neglected by physicians.

Those who analyze danger spots in present-day trend of medical affairs know that the aggregate of gullible folk who promote and support practices threatening to drain the sap from the economic life of medicine is bound to bring about the worst form of medical service.

A dangerous trend is vesting of undue power with dispensers of charitable foundations and the distributors of educational funds. With the increase of organized charity there has followed an enormous increase in the pauper class. The mendacious who depend upon charity for the whole or a part of their needs find the present system of easy benevolence fruit

ripe for their picking. Free clinics and other gratuities relating to sickness, added to ubiquitous health service curtails to a tremendous degree the usefulness of the so-called "family physician" and makes a new aristocracy of pauper invalids. In addition to creating a race of paupers this lowers the stamina and morale of a large class of people who should be self supporting and is a far cry from the early ideals of the colonists that have made of the United States the longest-lived of the world's numerous democracies. With this engrafting of foreign notions and pollution of socialistic ideas, how long can the nation and the democracy stand the strain?

School, district and industrial nurses yearly assume fresh responsibilities as to illnesses and their nature and guide cases into selected channels, sometimes with wisdom, but even so, these nurses act as a discretionary guard over the physicians of their communities—sad examples of the dogs being wagged by their tails.

Every day experience brings interference by nurses with orders from physicians; with the practice of medicine and surgery and with the abuse of charity in the medical world.

The editor believes in the ultimate victory of right. But to secure this victory there are certain inescapable tasks which each and every individual physician must set himself to do.

The solemn and serious duty resting heavily upon us is unappreciated by many members of the profession. The one and only antidote for the thousands of deceptive "uplift" schemes that degrade the science of medicine and destroy the public welfare is better work on the part of the profession and an ability to act cohesively when the time demands.

Indifference to the necessity of the motto "one for all and all for one" is one of the greatest current curses of the medical profession. Persecution threatens us. Men with their ears to the ground realize that never in the history of civilization has there been such a flowery path for imposters. So great have been the marvels of physical science brought to every home within the past five years from the perfection of the telephone, the airship, the victrolas and the radios that the great uncultured mass has come to look upon every man as his own miracle maker and to believe all the fairy tales of the quacks as never before. Medicine is too apathetic a science when it comes to blowing its own horn. The public imagination is aroused now as never before and advertising and self laudation have hypnotized the bulk of the population. Medicine must rise to defend the people against the advantages taken by the quack from this hysteria.

Organization is another keynote of the day. There are organizations of everything that gets anywhere. "Fighting fire with fire," to obtain any protection, the doctors must perfect an organization. In fact organization has become the first step in self-preservation. On every side arise organizations having as their sole motive the idea of lay persons to take over the practice of medicine, or to allow the opening of the "side door" so that incompetent persons can gain admission to the ranks of the profession.

Doctors must realize that powerful influences are working to attempt to deprive physicians of liberty of person and of conscience by restrictions, regulations, ukases and pronouncements of the self constituted regulators of mankind. Medical service by the laity is bound to fall short in the execution of its plan because it can not deliver sympathetic medical service.

Physicians must guard the public against official recognition of any body of untrained healers. Disagreeable though the task of going annually before the legislature may be, yet doctors must do this until there is required a uniform educational standard for all who wish to treat the sick.

Cooperation and organization is the only sure way to combat what has become one of the banes of professional life—the number of damage suits brought against physicians and that are on the increase. This too is the result of charlatanism.

Just now the public, eager for truth pertaining to hygiene and public health, should be given this truth by the profession and not the trash now in circulation. Newspapers, magazines, free public lectures and radio will help in this dissemination.

This is one of the tasks confronting physicians, as well as destruction of other evils, carried over from last year and from previous years.

After much education the profession realizes the existence of these evils. Let it be repeated that those that are not cured and that demand immediate and persistent attention include:

(a) Increasing disposition to paternalism:

1. Federal interference.
2. State interference.
3. County or township interference.
4. Municipal interference.

(b) Increasing tendency to bureaucracy.

1. Installation of Portfolio of Medical Supervision
2. Standardization of profession.
3. Destruction of individualism.

(c) Over-specialization of profession:

1. Increased cost of medical service.
2. Abolition of "family doctor."

(d) Centralization at political headquarters of medical control.

1. Washington, D. C.
2. Various state capitols.
3. County seats, etc.

(e) Medical legislation fiat in practice of medicines:

1. Harrison law.
2. Volstead act.
3. Smith-Towner bill.
4. Sheppard Maternity bill.
5. Venereal disease control legislation.

(f) Unqualified admissions to license to practice:

1. Christian Science.
2. Chiropractice, osteopaths, etc.
3. Over-trained nurses.

(g) Attempted financial segregation:

1. Tendency of moneyed foundations to despotism in professional mandates.

2. Tendency to make use of free clinics and sociological measures as a playground for wealthy faddists at expense of poor and diseased citizenry.

- (h) False premonitions as to self-preservation, i.e., primitive desire to get without giving—"Something for nothing."

(It was moved that the report be received. Motion seconded and carried.)

The President: The next order of business will be the report of the Standing Committees.

REPORT OF PUBLIC POLICY COMMITTEE

Dr. Emmet Keating, Chicago, Chairman, reported as follows:

There are so many needs for contact between organized medicine and the public that the Public Policy Committee feels it to be its duty to be continually on the job, individually and collectively. Duties of this kind require alertness in recognizing opportunities, discretion as to how they should be improved, diplomacy and tact.

One activity of the past year of the Public Policy Committee, along with many other members of the State Society, has been the filling of speaking engagements assigned by the Lay Education Committee. These talks were made to clubs and organizations of various kinds and to the general public by means of the radio.

Last fall the Public Policy Committee secured from the Chicago Association of Commerce an invitation to Dr. Ray Lyman Wilbur, Ex-President of the American Medical Association and President of Leland Stanford University, to give the address at one of the weekly noonday meetings. Dr. Wilbur gave his talk on the subject of "Health—A Business Asset," Wednesday, February 17, to a large audience and as all talks at these meetings are broadcasted, Dr. Wilbur's message of that day was heard throughout the land. Notice of the meeting was carried in several issues of the Chicago Medical Society *Bulletin* and we are glad to report that a great many physicians and their wives were in attendance.

The Committee again wishes to call the attention of the House of Delegates to the recommendation made last year that an endowment fund be raised to supply funds for the needs of the Lay Education Committee, whose work has proved of so much value, both to the public and to the profession. This work of the Illinois State Medical Society is being observed and discussed with great interest by state medical organizations throughout the United States.

The task is just beginning. As time goes on it will increase in scope and magnitude. New demands will arise for the committee's activities and greater financial support will be required. It is neither fair nor right that the members of the medical profession should carry this burden alone. The beneficiary is and will be the public. Its financial support will be necessary to the carrying out of future projects and will have the added benefit of stimulating public interest

in the work that is and will be done by the Lay Education Committee.

There are two ways by which an endowment fund can be established. One is by cash donations; the other, bequests in wills. In each case the medical profession should share with the public in this laudable undertaking.

A not inconsiderable fund could be raised by periodical reminders in the ILLINOIS MEDICAL JOURNAL and the weekly or monthly publications of county medical societies. The ILLINOIS MEDICAL JOURNAL and the county publications could carry, either permanently or periodically, blank forms—one for those wishing to make cash donations or donations of securities, and the other for those who wish to make provision in their wills.

Much can be accomplished if individual physicians will present this matter to those of their patients who are always ready and willing to contribute to agencies of public welfare. Such requests are doubly easy because the physician is asking nothing for himself.

As a concrete example—two months ago a lay individual executed and deposited in the trust department of one of the large loop banks of Chicago a will, making the Trust Company administrator of a fund approximating thirty thousand dollars, the income from which will be paid in perpetuity to the Illinois State Medical Society, to be used by the Lay Education Committee for the education of the public in matters of health.

The second proposition which should engage the attention of the Society and upon which definite action should be taken is a corollary of the first. From the insurance companies, from the large industrial concerns, from capable medical writers in current magazines and the daily papers, by means of the radio, and addresses to business organizations and women's clubs, has come a campaign for preventive medicine and periodic health examinations.

One of the most pressing needs of the coming year is the awakening of those general practitioners who have not as yet opened their eyes to the dawn of preventive medicine in the field of periodic health examinations. The public is in process of being successfully educated to seeing the value of this procedure for the assurance of better physical and mental health and the prolongation of useful lives.

There is abundant evidence that some general practitioners are reluctant to adjust themselves to the new type of practice which such examinations will require. They are restrained by the centuries old tradition that "They who are whole need not a physician"; by the fear that the public will refuse to pay for the time and knowledge expended; by the failure to realize that the public will quickly appreciate that work of this kind cannot and will not be done for trifling fees. The physician's school training was and is the study of well developed pathology. So long as the terminal stages of disease only are observed in studies and teaching, efforts directed towards prevention are minimized.

Periodic health examinations must for the most part be made by the family physicians. The specialist cannot

do this work. He can only help the general practitioner in those instances where his training and greater experience in limited fields of work make him especially proficient. The professors of internal medicine are too few in number to meet the coming demand of the general public. It will fall upon the family physician to make complete examinations, to correct departures from the normal that do not require the skill of special training and to give the counsel and advice that the specialist cannot give.

With the control of the great epidemic has come the opportunity for medical men to concentrate their attention upon the study of a thousand and one things that are not sudden in disabling, but are the remote cause of permanent ill health and untimely death. One of the greatest benefits to the profession, of periodic health examinations, will be the necessity for post graduate study. Samuel Johnson said, "Men need not only to be informed, but often reminded of the most common things."

One of the most valuable post graduate courses is the one that can be carried out by small groups of local physicians. Weekly or monthly two hour meetings which are attended by the same faithful few must be supplemented by half day sessions that every practicing physician in the community will find it necessary to attend.

The faithful service of the family physician of the past, in treating acute diseases will be replaced by just as faithful service of the family physician of the present and future in careful study of the physical and mental condition of the apparently well. Instead of a laborious house practice, the most of our patients will come to our office and will come by appointment.

It has taken many many years for preventive medicine to reach its present state of development. Preventive medicine in the way of sanitation and health department activities has made greater progress than preventive medicine for the individual. One of the reasons is that health departments work for salaries and devote their energies to certain specified activities.

Health departments develop programs and then proceed to carry them out in as complete a manner as public sentiment and the cooperation of the medical profession will permit. It is not so essential that the lay and professional workers in health department organizations believe in the program which they may be carrying on. They work for a boss and do what they are told. The physicians in private practice can neither be bossed nor led. He does many things in an experimental way before he has been convinced of the certainty of results, but he will not persist in any course of action unless he is convinced that he is dealing with settled facts.

Whatever can be done by the State Society to arouse and sustain the interest of the individual physician to take even more active measures than he is already doing, in the prevention of diphtheria, cancer and heart disease should be done. Most physicians believe that toxin-antitoxin will prevent diphtheria. There are some who do not; there are a multitude who are

indifferent to urging its use. All physicians are not aware of the menace to the heart of diseased tonsils and infected gums. If progress is to be speeded the State Society must have a program.

The education of the public in matters of health is a protection far superior to legislative enactments. This education can properly be given only by physicians. There are many people who do not know this. If we will continue to educate the people in the principles of health that can be made clear to their understanding, those principles will have little need of defense or guardianship.

We would respectfully recommend that the State Society take definite action which will insure, first: the establishment of a uniform system which will serve as a basis that family physicians may follow, modify or improve, to make these examinations and preserve their records for future generations or physicians and patients; second: the organization and supervision of small groups of physicians in each community which shall meet at least one-half day of each month.

EMMET KEATING, Chairman
WARREN JOHNSON,
JOHN F. SLOAN,

Committee.

(It was moved that the report be accepted.
Motion seconded and carried.)

REPORT OF THE LAY EDUCATION COMMITTEE

Miss B. C. Keller, Chicago, reported as follows:

Mr. President, Members of the Council and the House of Delegates: First, I shall report on the quantitative showing for the year's work in the Lay Education Committee—the ways and means in which conventional media were utilized to carry to the lay public and the profession alike the five fundamental policies of the campaign, which are as follows:

1. To make clear the meaning and necessity of the single standard of medical education.
2. To teach preventive medicine, toward which the periodical health examination is the single greatest step.
3. To hold back state medicine by stimulating in the component medical societies a responsibility for those public services of education and relief which, if neglected, tend to become official functions.
4. To effect a working cooperation with the allied professions having a mutual interest with the medical profession in the teaching of health.
5. To establish teamwork with the community to the end that all health movements may be conducted with guidance, counsel and direction of the organized medical profession.

Speaker's Bureau—Educational talks by representatives of the Bureau number 914 as compared to 484 in the year preceding. The average expense to the Society was \$2.86, indicating that many physicians not only donated their services, but paid their

own traveling expenses. Talks were made in 79 of the 102 counties in the state.

Newspapers—News material has been issued to press syndicates and 352 individual publications following such Society activities as notable scientific meetings, special community demonstrations and the movement for a state sanity commission as launched some months ago by the State Council. The most effective use of the press, however, seems to be the "health columns" appearing in 57 downstate publications, weekly, bi-weekly or tri-weekly, each over the signature and with the censorship of the local county medical society with the exception of St. Clair County where the material appears without signature and Effingham County where it is used in the name of the Effingham County Public Health Association.

Moving Pictures—Supplementing the leading service of the State Department of Public Health, 131 moving picture films on health have been shown before lay audiences. Sources have been the Extension Department, University of Wisconsin—the University of Illinois has nothing to offer us—the Society for Visual Education, the American Dental Association and the Metropolitan Life Insurance Company.

Radio—Stations WGN, WMAQ, WLS, WQJ, WENR, and WBCN, all in Chicago, having extended us broadcasting courtesies which have made possible 92 radio talks during the past year, the average cost to the Society—largely clerical—being \$1.15.

Exhibits and Demonstrations—Varying from an elaborate demonstration of the periodical health examination held at the Drake Hotel in January in connection with the annual clinic week of the Chicago Dental Society to the simple poster exhibits loaned to rural schools, this Committee has organized and arranged 145 exhibits and demonstrations in health education during the past year at an average cost of \$24.60.

Pre-School Child Campaign—This effort to have the apparently healthy child thoroughly examined by the family doctor and dentist before it reaches school years is being handled in cooperation with the Illinois State Federation of Women's Clubs, the Illinois State Dental Society, and the State Department of Public Health. Activity has been manifested in 116 towns, 27,825 forms of examination have been issued at the request of federated club women and 982 personal letters have been written to individual physicians explaining the significance of the campaign and suggesting detail for handling it. Of the more than 2,000 examinations which have already been reported at the office of the Lay Education Committee, it is notable that only 475 were given in public conferences and these at the recommendation of the local medical organization.

Health Pageants—Community Health Pageants were held in connection with the Northwest Side Branch and the Physicians Fellowship Club and with the Englewood Branch of Chicago Medical Society. That on the Northwest side cost approximately \$5,000 and receipts totaled about \$9.00 over and above that sum; that in the Englewood district showed an expense of

approximately \$5,750 and receipts of about \$11.00 less than that sum. This means a total of some 10,000 people were reached either through the demonstrated examinations, the health exhibits of the lecture and moving picture programs at a net cost to the society of \$2.00. We do not, however, recommend the Health Pageant as a method to be widely used, as its successful conduct means the neglect of other and equally vital state work.

School Examinations—Through the influence of this Committee together with able and effective cooperation from several councilors, 32 medical examinations of school children were conducted where such service was not regularly available.

Unorganized Women—In conjunction with other educational agencies, demonstrations were arranged during Health Week and immediately thereafter for unorganized women through the medium of ten large department stores in Chicago. This appeal seemed to reach large numbers of the women not in organizations and consequently, less inclined to over-stimulation and the diffusion of energy through a multiplicity of channels.

Scientific Speakers were furnished to 17 county medical societies and particularly successful symposiums were given in pediatrics, orthopedics, and the practice and technic of the periodical health examination.

Organizations—Service of some type was extended to a total of 73 organizations of varying degrees of activity in health education. Among the most significant and those which apparently promise much for future activity were:

1. Illinois State Federation of Women's Clubs, Child Welfare Department—19 districts.
2. Illinois Council of Parent-Teacher Associations—14 units.
3. Illinois Home Bureau—7 county units.
4. Illinois State Dental Society—Committee on Mouth Hygiene and Public Instruction.
5. State Department of Public Health—Department of Child Hygiene.
6. Teachers' Institute—23 counties.
7. Illinois State Association of Graduate Nurses—3 districts.

Of this general service 70 per cent was rendered to lay organizations; 80 per cent, was utilized by 20 counties from the 102 in Illinois.

It should be borne in mind that the foregoing may mean much or little. Strictly speaking, it has about the same relationship of the actual working out of the problem of health education in the state of Illinois as would a record of the pounds of pills and quarts of tonic and gallons of stimulants dispensed last year by the collective members of the Illinois State Medical Society bear relationship to the cutting down of mortality rates. Any value in such service is contingent upon its appropriateness to the condition diagnosed.

From the record of successes and failures during the past two years, certain recommendations can legiti-

mately be made for the greater appropriateness of further educational work to the needs of the people.

1. We must focus more intensively upon the child. Too much of the speaker's work, in particular, has been directed to adult audiences, less susceptible to a modification of customs and prejudices.

2. We must relate more closely the programs of lay education to the regulation business of the Society. Their cost to the Society is about \$2.00 per capita of the three-dollar raise in annual dues authorized at the 1925 state meeting. No matter what their influence upon the lay mind in general, they must be made an integral part of all county society work if they are ever to be justified in the mind of the individual physician.

3. We must make a direct effort to cut mortality rates. Nothing to the lay person will more quickly differentiate this movement from selfish propaganda and will more readily gain good will and cooperation for it. Those of you who have watched the development of Lay Education work know that this was the purpose of its sponsors from the beginning. We must make this purpose more obvious.

4. We must direct more attention to the unorganized groups.

5. We must equalize the amount of service now being rendered in the state in order that each county may receive its just proportion—whether the county society takes the trouble to ask for it or not.

It has been stated earlier in the course of this meeting that the unorganized medical man is a menace. May I add that I have seen abundant evidence that the weak county medical society is a deficit to any community, and a strong medical organization its greatest contribution to economic soundness and good American citizenship. This committee must be made to build and serve and make friends for your organization as a whole. It must pave the way for your leadership.

REPORT OF THE MEDICAL-LEGAL COMMITTEE

Dr. C. B. King, Chicago, Chairman reported as follows:

To the House of Delegates, Illinois State Medical Society:

During the year that has just passed, we have had thirty-one new malpractice suits, twenty-three in Cook County and eight in the remainder of the State. During the same period of time, forty suits were disposed of, twenty-six in Cook County and fourteen in the balance of the State. During the same time, there were thirty-two new claims reported from Cook County and sixteen from downstate. On May 1, we have remaining eighty-six suits, which is the lowest figure we have had since 1921. On May 1 of the respective years, there were pending in 1923, one hundred and one suits; 1924, ninety-four suits, 1925, ninety-five suits; 1926, eighty-six suits.

The total number of suits filed this past year is encouragingly less than the average for the past six

or eight years and the proportionate number filed outside of Cook County has decreased. The number of claims reported during the past year has been about the average.

We have been getting the usual number of suits originating in burns and have several troublesome suits, and one claim which will result in suit, that arises out of claim of retained instruments.

The Committee has found that most members of the Society respond very readily when their assistance is requested but we have found some members who do not appear to realize the duty that is owing.

A large number of the members of the Society seem to be carrying malpractice insurance and the Committee unanimously endorses that idea. While this increasing proportion that carries insurance may add somewhat to our difficulties in the cases where there is no insurance, it materially reduces the worry of the doctor who has a claim against him to know he is not likely to pay any judgment because he has the insurance policy behind him.

Of the cases disposed of during the past year, none was lost, but settlements were made in some of them, but these were comparatively small amounts that were paid. The only case in which we met with a reverse was one in which the Court had directed a verdict for the defendant. The plaintiff took the case to the Appellate Court and the Appellate Court reversed the case and sent it back for a new trial on the ground that the Court should have allowed the jury to pass upon it. This new trial has not yet been held.

Respectfully submitted,
MEDICO-LEGAL COMMITTEE,
By C. B. KING, Chairman.

REPORT OF THE LEGISLATIVE COMMITTEE

Dr. J. R. Neal, Springfield, reported as follows:

In the last General Assembly thirty-six bills designed to alter the Medical Practice Act were presented and by the active opposition of physicians throughout the State of Illinois the entire number were decisively defeated.

The hardest fought battle was that of the chiropractors who were exceptionally well organized and maintained a very large lobby at Springfield during the entire session. The chiropractors were very earnest in their work and had methodically canvassed every portion of the state. Most of their efforts were confined to the home districts of the Legislature and a careful analysis of the vote conclusively showed that in the districts where the physicians were indifferent regarding the measure the chiropractors gained their greatest number of votes. They fell twenty short of the constitutional majority in the House and although decisively defeated it is not a particularly creditable thing to the Illinois State Medical Society that fifty-seven law makers in the House of Representatives so voted to support a measure of this sort.

Among the outstanding cult bills that were presented, in addition to the chiropractic bill above referred to, was another bill creating a Chiropractic Board; two to regulate naprapathy; one for a Board

of Natureopaths; one creating an Osteopathic Board; one permitting osteopaths to do obstetrics; one permitting osteopaths to do surgery; one exempting osteopaths from the Optometry Act and classing them with the regular practitioner; and one osteopathic measure removing all limitations regarding drugless healers. Two Masseur Bills were also introduced.

Through the alleged and incorrect charges against the Chicago Health Department the League for Medical Freedom succeeded in getting a bill passed by both the House and Senate, which was designed to prevent health authorities from entering the home of a person suffering with a contagious disease without first getting a court order. The bill was so loosely drawn and obviously so dangerous in its functions, if it became a law, that your Committee did not believe that it was possible, even though the bill was passed by the House and Senate, for the Governor to allow such an unfortunate situation to become a law. While the bill was entirely one that concerned the administration of the Health Department, nevertheless one of the members of your Legislative Committee appeared with the Director of Public Health, and several others, before the Governor and after the matter was thoroughly explained to him he promptly vetoed the bill.

This was the only test during the entire session and demonstrated that the Governor has kept faith with the Illinois State Medical Society and that he opposed all vicious laws regarding the public health and favored the recommendations of the Illinois State Medical Society.

No other matters affecting the Medical Profession were permitted to pass either the House or the Senate.

Your Committee is deeply grateful to the Council for its advice and help and to those county societies which maintained active legislative committees and especially to the Chicago Medical Society for the excellent legislative organization, which worked perfectly throughout the entire session. The Chicago councilors had a tremendous task in perfecting the organization and there were but very few Cook County legislators who were not seen by an active committee of physicians in their particular district. Without the aid of Cook County in the chiropractic fight the bill would, undoubtedly, have passed the House.

Especial praise is due your President, Dr. J. C. Krafft, for his unselfish devotion to this important work in Chicago. Without his individual aid and advice on a number of occasions it would have been impossible for us to have attained the results that we did in the last General Assembly.

The Sheppard-Towner bill, known as the Federal Maternity Act is now pending in Congress and the proponents of the bill are asking an extension over the five-year period for which this bill was originally passed. The bill has passed the lower House and is now pending in committee in the Senate. Inasmuch as forty-three states accepted this Act it would rather follow that no great difficulty will be experienced in having it passed by the Senate. If the extension is granted and the President signs the bill the Illinois

State Medical Society will necessarily have to oppose it in the next General Assembly. Illinois was one of the five states that refused this federal meddling in maternity matters.

A large amount of credit is due your Lay Educational Committee for its excellent work in preventing this measure from coming up in the 1925 session of the Legislature by maintaining an intimate contact with the Federation of Woman's Clubs in the State.

Your Committee is appreciative of the cooperation in practically every senatorial district which made it possible to conduct the entire program without asking a single physician to take his time and the necessary expense to come to Springfield during the session for lobbying purposes. All factions which we were forced to oppose maintained large and constant lobbies in Springfield.

Respectfully submitted,

C. E. HUMISTON,
E. H. BOWE,
J. R. NEAL.

(It was moved that these reports be accepted. Motion seconded and carried.)

DR. J. W. VAN DERSLICE, Chicago: I move that the recommendations by the Councilors be referred to the Committee on By-Laws.

THE PRESIDENT: We have no standing committee on constitution and by-laws.

DR. J. W. VAN DERSLICE, Chicago: I move that we accept such recommendations from the Councilors as notices of a change in by-laws. (Motion seconded and carried.)

DR. J. W. VAN DERSLICE, Chicago: I move that these changes be referred to the Committee on Resolutions to be reported on Thursday. (Motion seconded and carried.)

NEW BUSINESS

THE PRESIDENT: I will appoint as the Committee on Resolutions, Drs. C. E. Humiston, Chicago, J. E. Tuite, Rockford and C. F. Newcomb, Champaign.

THE SECRETARY: I have two or three letters which can be referred to the Committee on Resolutions. (Reads letters).

I have also an invitation from the Murphy Memorial Association to the dedication of the Murphy Memorial on June 10 and 11.

DR. J. W. VAN DERSLICE, Chicago: I move that the invitation be referred to the Council with power to act. (Motion seconded and carried.)

On motion duly made and seconded the House adjourned at 11:40 P.M. to meet again on Thursday morning.

SECOND SESSION

Thursday Morning, May 20, 1926

The Thursday morning session was called to order at 8:25 a.m. by the President. The Secretary called the roll and announced that a quorum was present.

THE PRESIDENT: We will have the report of the Credentials Committee.

DR. J. S. NAGEL, Chicago: There are 112 delegates present, 70 from down state and 42 from Cook County.

THE PRESIDENT: The next order of business will be the reading of the minutes of the previous meeting.

DR. J. S. NAGEL, Chicago: I move that the reading of the minutes be dispensed with. (Motion seconded and carried.)

THE PRESIDENT: The next order of business will be the election of officers. I will call for nominations for President-Elect.

Dr. J. S. Nagel, Chicago, presented the name of Dr. G. Henry Mundt, Chicago, for President-Elect. Dr. W. H. Gilmore, Mt. Vernon, moved that the nominations be closed and that the Secretary be instructed to cast the ballot of the House of Delegates for Dr. Mundt as President-Elect. Motion seconded and carried. The President declared Dr. Mundt, elected.

Dr. C. F. Newcomb nominated Dr. Earl D. Wise, Champaign for First Vice-President. Dr. Emmet Keating, Chicago, moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Wise as First Vice-President. Motion seconded and carried. The President declared Dr. Wise elected.

Dr. S. E. Munson, Springfield, nominated Dr. C. S. Nelson, Springfield, for Second Vice-President. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Nelson for Second Vice-President. Motion seconded and carried. The President declared Dr. Nelson elected.

Dr. A. J. Markley, Belvidere, was nominated for Treasurer. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Mr. Markley for Treasurer. Motion seconded and carried. The President declared Dr. Markley elected.

Dr. W. D. Chapman, Silvis, nominated Dr. H. M. Camp for Secretary. It was moved that the nomination be closed and the President in-

structed to cast the ballot for Dr. Camp as Secretary. Motion seconded and carried. The President declared Dr. Camp elected.

For Councilor of the First District, Dr. J. R. Neal, nominated Dr. D. B. Penniman, Rockford, to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Penniman for Councilor of the First District. Motion seconded and carried. The President declared Dr. Penniman elected.

For Councilor of the Second District, Dr. E. E. Perisho, Streator, was nominated to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Perisho for Councilor for the Second District. Motion was seconded and carried. The President declared Dr. Perish elected.

For Councilor of the Third District, Dr. S. J. McNeill, Chicago, was nominated to succeed himself. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. McNeill for Councilor of the Third District. Motion seconded and carried. The President declared Dr. McNeill elected.

For Councilor of the Eighth District Dr. Cleaves Bennett, Champaign, was nominated. It was moved that the nominations be closed and the Secretary be instructed to cast the ballot for Dr. Bennett for Councilor of the Eighth District. Motion seconded and carried. The President declared Dr. Bennett elected.

For Councilor of the Ninth District, Dr. I. H. Neece, Decatur, was nominated. It was moved that the nomination be closed and the Secretary instructed to cast the ballot for Dr. Neece for Councilor of the Ninth District. Motion seconded and carried. The President declared Dr. Neece elected.

For Delegates to the American Medical Association the following were nominated: Drs. E. P. Sloan, Bloomington, T. O. Freeman, Mattoon, R. L. Green, Peoria, C. J. Whalen, Chicago, W. A. Pusey, Chicago and J. S. Nagel, Chicago.

Dr. W. H. Gilmore, Mt. Vernon, moved that the nominations be closed and the Secretary instructed to cast the ballot for the six delegates named. Motion seconded and carried. The President declared them elected.

For alternates the following were named: Drs. G. C. Brown, St. Marie, G. C. Otrich, Belleville, Alden Alguire, Belvidere, S. J. McNeill, Chi-

cago, Emmet Keating, Chicago and N. S. Davis, Chicago.

It was moved that the nominations be closed and the Secretary instructed to cast the ballot for the six alternates named. The President declared them elected.

As members of the Committee on Public Policy, Drs. Emmet Keating, Chicago, Warren Johnson, Chicago and George Michell, Peoria, were nominated and duly elected.

For the Committee on Medical Legislation, Drs. John R. Neal, Springfield, C. E. Humiston, Chicago, and Edward Bowe, Jacksonville, were nominated and duly elected.

For the Medico-Legal Committee two members were nominated, Drs. C. A. Hercules, Chicago, and George Weber, Peoria, were nominated and duly elected.

As the Committee on Relations to Public Health Administration Drs. Frank R. Morton, Chicago, Frank Maple, Chicago, E. D. Levisohn, Chicago, J. E. Tuite, Rockford, and E. P. Coleman, Canton, were nominated and duly elected.

The President asked the Second Vice-President, Dr. J. J. Pflock, to take the chair and preside during the remainder of the session.

The next order of business was the report of the Committee on Resolutions by the Chairman, Dr. J. E. Tuite, Rockford. The following resolutions were presented and acted upon in turn:

1. Postmortems in Public Institutions

WHEREAS, It is the conviction of the Eye and Ear Section of the Illinois State Medical Society that the knowledge derived from postmortems is essential to the progress of medical science and to the welfare of the citizens of this state, and

WHEREAS, It is becoming more difficult to secure postmortems in public institutions, therefore, it be

Resolved, That a committee of three be appointed by the Illinois State Medical Society to investigate the holding of postmortems in public charitable institutions, especially with reference to their relation to research and teaching in medicine, and that this Committee report to the Council of the Illinois State Medical Society.

This resolution was presented by Dr. George W. Boot, Chicago, at the Eye, Ear, Nose and Throat Section of the Illinois State Medical Society.

It was moved that the resolution be adopted. Motion seconded and carried.

2. Endowment Fund for Work of Lay Education Committee

The Public Policy Committee of the Illinois State Medical Society recommends to the House of Delegates that an endowment fund be established for the

purpose of carrying on the work of the Lay Education Committee.

It was moved that the resolution be adopted. Motion seconded and carried.

3. Formation of a Radiological Section

WHEREAS, The Central Illinois Radiological Society and the Chicago Roentgen Society, the only Radiological Societies of Illinois, have unanimously resolved to favor the creation of a Section of Radiology in the Illinois State Medical Society, and

WHEREAS, The membership of these two Societies being composed of members of the Illinois State Medical Society, who, if a Section of Radiology is created, would, in a large measure, attend the annual meetings of our State Society, and

WHEREAS, The formation of a Section of Radiology in our State Society will tend to elevate the radiological profession in Illinois and keep it in the hands of qualified physicians, and

WHEREAS, A Section of Radiology was applied for last year at which time the House of Delegates referred it to the Council for further investigation, and

WHEREAS, The Council appointed a special committee to investigate the need and desirability of such a Section and that the majority of members of this committee have already expressed themselves as favorable to the creation of such a Section, and believe the interests of the Society will be best served by the formation of such a Section, and that the report, therefore, of this committee will be a favorable one, and

WHEREAS, The creation of a Section of Radiology in our State Society has already met the approval of every member of the present Scientific Committee of the State Society, and of a large number of the former presidents of the Society, and

WHEREAS, Resolutions endorsing the proposed section of Radiology have been passed by a large number of county medical societies of the State, including the Council of the Chicago Medical Society, and

WHEREAS, The State Society of Wisconsin, Massachusetts, Louisiana and Texas have already formed Sections of Radiology in their Societies in addition to the American Medical Association, therefore

We, the respective officers of the Central Illinois Radiological Society and Chicago Roentgen Society, respectfully urge that you establish a Section of Radiology in the Illinois State Medical Society and thus place Illinois with the leaders in this progressive movement.

FOR THE CENTRAL ILLINOIS RADIOLOGICAL SOCIETY

(Signed) HAROLD SWANBERG, Quincy,
President;
WALTER BAIN, Springfield,
Vice-President;
H. C. KARIHER, Champaign,
Secretary-Treasurer.

FOR THE CHICAGO ROENTGEN SOCIETY

(Signed) E. L. JENKINSON, President,
I. S. TROSTLER, Vice-President,
E. S. BLAINE, Secretary-Treasurer.

The Section of Radiology for the Illinois State Medical Society has been endorsed by the following:

1. Central Illinois Radiological Society.
2. Chicago Roentgen Society.
3. Committee appointed by the Council to investigate the matter, consisting of Drs. J. C. Krafft, Chicago, Chairman; H. H. Camp, Monmouth, and R. R. Ferguson, Chicago.
4. The following County Medical Societies; Adams, Chicago Medical Society, Crawford, Jackson, Jersey, Kankakee, Knox, Macon, McDonough, McLean, Peoria, Pike, Sangamon, Union, Vermilion, Will-Grundy, Winnebago, Woodford and Edgar.
5. Every member of the present Scientific Committee of Illinois State Medical Society, as follows: J. C. Krafft, President; H. M. Camp, Secretary; Section on Medicine, B. V. McClanahan, Galesburg, Chairman, and Leroy H. Sloan, Chicago, Secretary; Section on Surgery, P. H. Kreuscher, Chicago, Chairman, and E. P. Coleman, Canton, Secretary; Section on Eye, Ear, Nose and Throat, C. M. Robertson, Chicago, Chairman, and Louis Ostrom, Rock Island, Secretary; Section on Public Health and Hygiene, C. H. Diehl, Effingham, Chairman, and H. V. Gould, Chicago, Secretary.
6. The following past Presidents of the Illinois State Medical Society: A. L. Brittin, Athens; E. B. Cooley, Danville; E. W. Fiengenbaum, Edwardsville; M. L. Harris, Chicago; H. C. Mitchell, Carbondale; L. H. A. Nickerson, Quincy; E. H. Ochsner, Chicago; E. P. Sloan, Bloomington, and C. J. Whalen, Chicago.

Dr. Tuite moved the adoption of the resolution.

DR. J. W. VAN DERSLICE, Chicago: I think we ought to take into consideration that we should not encourage the adoption of new sections. The policy of the American Medical Association is against multiplicity. We had in this town on Tuesday five sections running concurrently. There are very few of the small cities that can take care of six sections within any radius that will be accessible to the members. An additional section means additional expense for the renting of a hall. I disapprove very heartily of the resolution. There are more industrial surgeons in this state by far than radiologists. The industrial surgeons have their meetings entirely separate from that of the State Society and we are under no obligations to pay their expenses and they get along nicely with their meetings. So far as I know the number of radiologists is only about 1 per cent. of the whole membership.

There is hardly a specialty that would not show a greater percentage of members than radiology. I am opposed to increasing the number of sections unless there is a very definite reason.

DR. W. D. CHAPMAN, Silvis: A similar resolution appeared before the Council. The Council came upon a section of our by-laws, reading as follows:

Chapter IV, Section 1.—For the transaction of scientific business, there shall be one or more Sections, as may be determined from year to year by the committee on scientific work.

Chapter IX, Section 2.—The Committee on Scientific Work shall consist of the chairman and secretaries of the respective Sections and the President and Secretary of this Society. It shall arrange the scientific program for each session, subject to instruction by the House of Delegates.

I move as a substitute motion that the resolution be referred to the Scientific Committee.

DR. J. W. VAN DERSLICE, Chicago: Granting all that Dr. Chapman said, I do not think we should sidestep. We want other sections or we do not. There is a majority of this House coming back here from year to year. It may be that the Scientific Committee made up as it is this year without any recommendation from this House would endorse the Radiological Section and the Committee next year might not want such a section. The Committee on Scientific Work changes every year. This House should decide the question.

DR. EMMET KEATING, Chicago: I am sorry to take issue with Dr. Van Derslice. The subject of radiology is becoming a highly technical one. If any of you have taken the time to attend a meeting of radiologists you know that what they talk about is Greek to you. What does that mean? If we are going to have progress in radiology, we must give these men an opportunity to get together.

DR. J. S. NAGEL, Chicago: I would like to see this question settled by the House of Delegates. If we do refer this to the Scientific Committee it does not mean that we can have the Section because it is up to the Council to approve of it. I am opposed to creating another section because we turned down the petition of the industrial surgeons. If we pass on this as a new section, there is no reason why all the specialists will not want to create new sections. There is no reason

why the radiologists should not come on the general program.

DR. W. H. GILMORE, Benton: I think the question of an additional section is up to this body. For quite a few years I have done nothing but X-ray work. I am opposed to this new section not as an X-ray man because for me it would be a wonderful thing. I am convinced that we should have only two sections. I think the Eye, Ear, Nose and Throat Section should have a part in these two programs. If we have a Section on Radiology what will happen? The only ones who will go will be those who are particularly interested. The men in general surgery or medicine will not go. It would be much better if the Scientific Committee would give the radiologists two or three papers in the General Session and let us carry our message to you. If we have a separate section it will develop into technicalities.

DR. J. C. KRAFFT, Chicago: I happen to be a member of the Committee appointed to look into this matter. We had considerable correspondence. Letters from nineteen or twenty counties were received and also many from individuals. Many state societies have such a section. The American Medical Association has seen fit to put in such a section. If we want to encourage these men we must have a section for them. The other sections are of no interest to the radiologist. When you talk about a little expense, what is the difference? Fifty, seventy-five or one hundred dollars to a Society of 7,000 does not mean much, I am for the resolution.

DR. E. P. SLOAN, Bloomington: I would hate to see the X-ray men get a large section of our Society. There are only a few people to listen to X-ray papers. If you put them on the general program the men not interested do not stay and the essayist is embarrassed. In one of the western states they have a section on radiology which includes diathermy and all light treatment. They put them on the last day of the meeting and they had the largest attendance this year they ever had. If you put them on the general program the other men refuse to stay. Reference was made to the industrial surgeons. The industrial surgeon is not a specialist. Every general practitioner thinks he is an industrial surgeon. I am free to admit that these men should have an opportunity to discuss their own problems.

DR. W. D. CHAPMAN, Silvis: With the consent of my second, I would like withdrawn the substitute motion. It seems that the members of the House feel that they have the authority to take action at this time.

THE VICE-PRESIDENT: There was no second. We shall now vote on the original motion to accept the resolution. The vote on the motion showed 44 in favor and 40 against. Motion carried in favor of adopting a Section on Radiology.

4. *Harrison Narcotic Act*

WHEREAS, There has been introduced into the Sixty-ninth, Congress a bill to strengthen the Harrison Narcotic Act of 1914 and,

WHEREAS, The declared purpose of said bill, known as S. 4085 is "to clear up certain points which have been raised in certain courts to the disadvantage of the government," and

WHEREAS, This bill is a flagrant invasion of the rights of the states to regulate the practice of medicine, therefore, be it

Resolved, That the Illinois State Medical Society voice its disapproval of S. 4085, and, be it further

Resolved, That the senators and representatives from Illinois be requested to oppose its passage.

It was moved that the resolution be adopted. Motion seconded and carried.

5. *Resolution Opposing Sheppard-Towner Bill*

The Resolutions Committee offers the following motion: It is moved that the Legislative Committee of this Society be instructed to advise the United States Senators and Representatives from Illinois protesting the extension of the Sheppard-Towner law now before Congress.

It was moved that the resolution be adopted. Motion seconded and carried.

6. *Formation of a New Councilor District*

WHEREAS, The Ninth Councilor District covers so much territory that it is impossible to serve the several component societies, therefore, be it

Resolved, That the by-laws of this Society be so amended to create a Tenth District and to include in it the following counties: St. Clair, Washington, Monroe, Randolph, Perry, Jackson, Union, Alexander, and Pulaski.

It was moved that the resolution be adopted. Motion seconded and carried.

7. *Insurance Examiners*

WHEREAS, It is our belief that it would be to the advantage of all reputable physicians to belong to component medical societies, and

WHEREAS, The human mortality rate has been materially lowered by efforts of ethical physicians belonging to and cooperating with medical societies, and

WHEREAS, All life insurance companies are inter-

ested in a lowering of the mortality rate for material reasons and look for aid from reputable physicians, therefore, be it

Resolved, That the proper authorities of the American Medical Association confer with insurance companies with the view of their employing so far as possible for medical examiners members of the county, state and national medical societies.

(Signed)

Stephenson County Medical Society.

Your Committee feels that it has no authority and asks that the matter be referred to the Secretary.

8. *Public Health Legislation*

WHEREAS, The Council of the Illinois State Medical Society at a meeting held December 8, 1924 heard a report presented by a special committee on Public Health Legislation, and

WHEREAS, It seems advisable that medical societies should constantly keep in mind the need of adequate legislation to safeguard the health of its citizens,

Therefore be it Resolved, that the House of Delegates of the Illinois State Medical Society approve this report and advise the Legislative Committee of its action.

Dr. Tuite moved the adoption of this resolution. Motion seconded.

DR. J. W. VAN DERSLICE, Chicago: I believe the House of Delegates has gone on record on several occasions as being opposed to the County Health Officers Bill. I have no reason to change my mind in regard to the bill.

DR. J. E. TUITE, Rockford: The Council passed this resolution.

DR. W. E. KITTLER, Rochelle: The first we heard about this resolution was forty-eight hours before we came to our first meeting. It seems to me the different counties ought to have a chance to have this presented to them and to decide whether they want county health officers in their community. It looks to me as though we were trying to get into state medicine by adopting such a resolution.

DR. E. P. SLOAN, Bloomington: In the state of Illinois there are over 2,600 lay health officers and not more than one-fourth of them know they are health officers. Every supervisor is a health officer of his county. You may say this is not important to Chicago. Some of the epidemics that have started downstate have traveled to Chicago just because the county health officers knew nothing about them. There are about 300 public health nurses in Illinois who are making diagnoses because they have no medical super-

vision. This should be corrected in some way. The state Board of Health would like to have the doctors take it up and see that it is corrected. At the last meeting of the State Board of Health there was a bill proposed which would give the supervision of county health matters to medical health officers. The only joker was that he would have charge of all medical activities, including the nurses, something that the county has not power to do but which cities of over 10,000 have. This matter should be taken care of by the State Medical Society in some way. I do not believe that we should adopt any one plan but I do believe that we should request our Council and our Legislative Committee to get behind some arrangement that would give medical supervision over these 2,600 lay health officers and 300 nurses that have no medical supervision.

DR. J. S. NAGEL, Chicago: This resolution is really asking us to re-affirm the action of the Council. I would like to call upon the Secretary to read the report of the Council.

THE SECRETARY: This report was presented to the Council at the meeting on December 8, 1924:

1. The State Society is vitally interested in the public health of the State.
2. There is need of more efficient and adequate preventive health service in many communities.
3. The County rather than the township and village is the proper unit for health supervision under the direction of full time medical health officers.
4. The Society believes in the greatest amount of decentralization of authority compatible with efficiency and that the position of health officers should be safeguarded from improper political interference.
5. County Health Officers should devote their entire time to the duties of their office and should not be permitted to engage in private practice of medicine.
6. Before a county system of health work can be inaugurated, enabling legislation is necessary.

DR. T. B. KNOX, Quincy: My local society is vitally interested in this resolution and I am vitally interested. I cannot understand why this question should be discussed by men who are doing special work, particularly surgery. If you were to ask these men who are discussing the resolution tomorrow where there was an epidemic of scarlet fever or typhoid fever they would not know. My society feels that this is an entering wedge to state medicine. You say you want to keep them out of politics. You cannot do it. My county society is opposed to the adoption of this resolution.

DR. W. D. CHAPMAN, Silvis: I am doing general work and I know where there is an epidemic of German measles. I would like to explain at this time that the earlier action of the Council was taken at a time when an objectionable county health officer bill was up for endorsement. Every bill introduced has been found to be objectionable. That resolution seems to us absolutely safe and does not endorse any bill that has been introduced. The new resolution places no compulsion on any county that does not wish to employ a medical health officer. It leaves the matter entirely to local option but does leave the county medical society free to exercise its influence with the Board of Supervisors for the employment of medical health officers, of whom the county medical society might approve. So far as I know it appears this time as a safe and sane method of combating legislation on the outside.

DR. ANDY HALL, Mt. Vernon: The question is whether these counties prefer to go ahead with 75 per cent. health officers who are laymen or whether they would prefer to have physicians as health officers. In my county the worst epidemic of smallpox in recent years was distributed by a health officer of that county who was the supervisor. The epidemic was started by a child who was attending school but who lived outside the city of Mt. Vernon in the township and our health officer had no jurisdiction over the child.

DR. E. H. W. KUPKE, Kenney: I am county health officer and the supervisors want to co-operate with me. I believe in every town if every doctor will take the responsibility and make it clear to the supervisor what should be done and what should not be done, there will be co-operation. If you look a little more to Springfield and ask them to help you you will get along with the local health officers.

DR. T. D. DOAN, Scottville: I think there is a misunderstanding here. It is not a matter of whether the supervisor wants it; it is a matter of his medical knowledge. It is not as though you were passing a law. It is a matter of recommending a change. It is not a step in the direction of state medicine. It is a matter of supervising the country if the county board wishes it done. These supervisors are law-abiding citizens but they do not understand the medical aspects of many things that come up in a community.

DR. J. S. NAGEL, Chicago: It seems to me we are wasting a good deal of time. I move the privilege of the floor to Dr. John R. Neal, Springfield.

DR. JOHN R. NEAL, Springfield: It does not come within the domain of the Legislative Committee to advise what to do. If it is your wish that a bill shall be introduced relative to county health officers, we shall do it. One university in an adjacent state is giving a short course leading to the degree of Doctor of Public Health. Their graduates are good men. They are scientific men in so far as sanitation goes. Naturally they are going to find a niche in the world and they are going to get into the positions we are talking about. I am positive that if the medical men throughout the United States had taken the same interest in the Sheppard-Towner bill as did the Illinois medical men, championed by Dr. Whalen in his able editorials for the last four years and by other thinking men, there would not have been any Federal Maternity Act. The medical men of the United States were responsible for stopping it. Nineteen thousand dollars was sent back to Washington; this was sent to Springfield as a payment for Illinois. You do not want to be supervised from Washington. It is a difficult task sometimes to see why certain legislators vote certain ways. If pressure is brought to bear on a bill, pertaining to short course health officers that bill if passed is going to engage the activities of the Health Department at Springfield and compel it to employ Doctors of Public Health who will come into your territory and you are going to accept them if it is a state law or you will get a vacation and be a guest of the warden. The Director of Public Health is coming to this body and asking us if this is a problem in which we are interested. If he thinks there is an advantage in having medical supervision of every small county in the state, we should heed him. It is no idle boast that a danger exists when we see that there are 2,400 health officers of whom 2,200 are lay men. I heartily agree with the doctor not to surrender individual rights. I do not know what the problem will lead to. I glean from this communication that we are asked to propose a bill which is acceptable to the State Society, which is an enabling act, a bill to be written by us and acceptable to us, and the very moment the State

Legislature passes an amendment which is not satisfactory we have the privilege of withdrawing our support. I think we should weigh the matter carefully. I could see great danger in what might be termed centralized supervision of the county health officers if the Director of Public Health appointed the health officers in the counties. I do not believe it is possible for the 102 counties to agree to accept the proposed bill if it becomes a law; it is entirely optional. If we in our local society cannot control our board of supervisors by having an ethical medical man appointed as a health officer, then our political strength is nil and we are certainly going under false colors. We cannot start at Washington, we cannot start at Springfield, we have to start in the township in our own counties.

THE VICE-PRESIDENT. There is a motion before the House to affirm the report of the Council made on December 8, 1924. Motion carried.

9. *Proposed Amendment to the Constitution*

It is proposed by your Committee that the constitution be amended as follows:

1. That Section 1, Article 6, be amended to read, "12 councilors," instead of eleven.
2. That Section I of Article 8 be changed to read "12 councilors."
3. That Section II of Article 9 be changed to read "four shall be elected annually to serve for three years."

Dr. Tuite moved the adoption of the amendment. Motion seconded and carried.

THE VICE-PRESIDENT: The next order of business will be the report of the Committee on Medical History by Dr. Lucius H. Zeuch.

DR. LUCIUS H. ZEUCH: I have here some pamphlets containing information regarding the history. The book is about ready. There has been considerable expense involved in its production and we hope to have a good subscription list.

It was moved that the report be accepted. (Motion seconded and carried.)

THE VICE-PRESIDENT: The next order of business is to elect a Councilor for the new Tenth District.

DR. W. D. CHAPMAN, Silvis: In order to make a better balance, I move that this new Councilor be elected for one year. (Motion seconded and carried.)

DR. G. C. OTRICH, Belleville: I nominate Dr. J. S. Templeton of Pickneyville as Councilor for the Tenth District. It was moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Templeton as Councilor of the Tenth District. Motion seconded and carried. Dr. Templeton was declared elected.

THE VICE-PRESIDENT: The next order of business is the selection of a 1927 meeting place.

DR. A. E. WILLIAMS, Rock Island: I wish to present an invitation from the tri-cities, Moline, Rock Island and Davenport.

THE SECRETARY: I have eight telegrams from various officials in Moline inviting the Society to meet there in 1927.

DR. J. S. NAGEL, Chicago: I move that Moline be selected as the next meeting place. (Motion seconded and carried.)

THE VICE-PRESIDENT: I wish now to introduce the newly elected officers.

DR. G. H. MUNDT, President-Elect; Dr. C. S. Nelson, Second Vice-President, and Dr. Cleaves Bennett, Councilor, were introduced and expressed their appreciation of the honor conferred upon them.

THE SECRETARY: I would like to move that the annual dues for the ensuing year be eight dollars. Motion seconded and carried.

NEW BUSINESS

DR. W. D. CHAPMAN, Silvis: I should like to recite for the House of Delegates an incident which occurred this year which was the cause of very great regret. Three of us were sitting in a room adjoining that in which the Section on Public Health and Hygiene had been meeting when an unassuming man came in and asked us when the session would start. We told him that the Section had finished their program and adjourned at 11:30 in the morning. He said he was supposed to talk before that Section in the afternoon. On a little more conversation it developed that this man was a statistician of national and international repute who had traveled 1,000 miles from Boston at the invitation of one of our Sections to speak before it. He had been in town approximately twenty-four hours and no one had gotten in touch with him. He had been registered at the Inman Hotel. It seems to us that this was a failure of courtesy for which there was no excuse. Somebody fell

down hard and I do not know what apology can satisfy the man. I have never before felt there was a failure of courtesy on the part of this Society to any of its guests but I felt that the failure was so great that there was nothing to be said at the time. Thinking it over later it seemed to me that a letter should be written to that man and I do not believe that an expression from the House of Delegates of the Illinois State Medical Society would very greatly assist the Secretary in explaining to Dr. Frederick L. Hoffman that there was no intentional affront and that the Society as a Society sincerely regrets the occurrence. I do not know what occurred among the Section officers but I do know that Dr. Hoffman had never been supplied with a program of the meeting. We were told that he was paged and that his name was on the hotel register. I feel that whoever invited Dr. Hoffman to address that Section was derelict in not getting in touch with his movements or meeting him at the train. It seems to me that an expression from this House would do a little bit toward salving the injured feelings of Dr. Hoffman.

DR. E. P. SLOAN, Bloomington: I think I heard some man ask the clerk at the Hotel for Dr. Hoffman on Tuesday night. He said he was not registered. If there has been any trouble in Champaign it has been due to the man at the Inman Hotel named Jackson.

DR. C. J. WHALEN, Chicago: Dr. Gould is the Secretary of that Section. Yesterday morning considerably agitated and embarrassed he came to me and asked me if I knew anything about where Dr. Hoffman could be found. He said he was registered at the hotel, that notes had been left for him and every effort made to find him but he could not be located. It is not all the fault of the Chairman of the Section.

DR. S. E. MUNSON, Springfield: I want to confirm the remarks made by Dr. Sloan because of the discourtesy with which I was treated this morning.

DR. W. D. CHAPMAN, Silvis: I move that the House of Delegates instruct the Secretary to send to Dr. Frederick L. Hoffman a diplomatic expression of regret on the part of the Society.

DR. E. D. LEVINSOHN, Chicago: I would like to amend that by adding that the Secretary get in touch with the Secretary of the Section and get the details in full.

Amendment accepted. Motion seconded and carried.

DR. J. S. NAGEL, Chicago: I move that the Secretary be instructed to address a letter to the Chamber of Commerce of Urbana-Champaign in regard to the insulting manner in which our members were treated by the Hotel Inman. Motion seconded.

DR. F. P. HAMMOND, Chicago: I am wondering if making a public expression of that kind is in keeping with good judgment. Personally I feel that an expression from a Committee a little bit under cover would be better. Let us send a letter thanking them for their hospitality and then let the Committee go quietly to the authorities and explain this situation.

DR. E. P. SLOAN, Bloomington: I do not believe there is a citizen of Urbana or Champaign who does not feel the same way toward this man Jackson. The proprietor of this hotel has been in politics. I feel that the *Champaign News* should be furnished with a copy of our resolution.

DR. J. S. NAGEL, Chicago: We were insulted publicly. They were not afraid of any publicity. Motion made by Dr. Nagel carried.

DR. MATHER PFEIFFENBERGER, Alton: I move that the House of Delegates go on record thanking the local Committee for the nice manner in which we have been handled at this convention. We have had the best registration that we have had in years. The Mayor also should be thanked for his courtesy.

Motion seconded and carried.

DR. J. W. HAMILTON, Mt. Vernon: Would it not be a good thing to include the Champaign Medical Society?

THE VICE-PRESIDENT: That will be included in Dr. Pfeiffenberger's motion.

DR. J. J. PFLOCK: I would like to thank Dr. Krafft for the courtesy shown the Second Vice-President in asking him to occupy the Chair during part of this morning session.

Adjournment *sine die* at 10:30.

AMERICAN PSYCHIATRIC ASSOCIATION

OFFICE OF THE CHAIRMAN, MULVANE BUILDING,
TOPEKA, KANSAS

CORRECTED FINAL REPORT, JUNE 10, 1926

To the Members of the American Psychiatric Association:

Your Committee on the Legal Aspects of Psychiatry made a preliminary report at the 81st annual meeting

of the Association at Richmond, Virginia, on May 15, 1925. That report was printed in full in *The American Journal of Psychiatry*, Volume 5, No. 2, October, 1925, pages 306-311. Careful perusal of the report is recommended to the membership.

The committee asked for a continuation which was granted. It was decided to report in writing to the entire membership certain points of agreement and disagreement with regard to the various problems outlined in the questionnaire printed in the 1925 report. Members were then asked to indicate in writing their attitude toward the various points dealt with, mailing their comments to the committee. This enabled us to make indicated revisions in the final report, corresponding to the prevalent attitude and convictions of the majority of the members of the association. This final amended report is now respectfully submitted.

The committee felt that the problem assigned them was not merely one of what we as psychiatrists should recommend to the lawmakers in regard to bills regulating expert testimony. It seemed to us that our problem was one of reinterpreting to society the function and the objectives of the psychiatrist, particularly insofar as these concern the type of behavior which is technically and popularly regarded as criminal. The committee felt that it was exceedingly important to divert the attention of the public from the relatively minor issue of *alienistics* to the major issue of *psychiatrics*.

In the practical application of psychiatry to problems of criminal law, the prevalent concepts of tradition and long usage conflict sharply with psychiatric attitudes. Popular theories of retribution and established methods of dealing with offenders almost entirely prevented a scientific envisagement of crime until recently when psychiatrists, in spite of their original limitation of field, discovered and demonstrated that types and trends of abnormal psychology extended far out from the asylum into the court room, school and home. The psychiatrists found their experience and technique equally applicable to the irascible employee, the retarded school child, the persistent stealer, the compulsive drinker, the paranoid murderer, and the textbook cases of epilepsy, melancholia and schizophrenia. Face to face with the legal partitions of misbehavior into "insane" and "criminal" psychiatrists now find themselves with no technical interest in these partitions and no general agreement with them but with a driving concern in all the unpropitious trends of human character; with all acts, thoughts, emotions, instincts and adaptations, either socially or individually adverse. Some of these constitute committable "insanity," some of them do not; but all of them are psychiatric problems.

The question of responsibility is constantly being raised and the psychiatrist is frequently asked to make definite statements regarding the responsibility of a particular subject. As White and Glueck have shown, however, the conception of responsibility is exceedingly vague. In a strictly legal sense it probably means the capacity to change one's conduct in response to the direction of certain painful associations. Of course this is not the sense in which the public understands it or

uses it: In the latter case it is merely an echo, the antiquated crystallization of primitive and infantile reactions known as talion law. Of course no scientist has a moment's consideration for such emotionally determined policies or mystical concepts of atonement. There was a time when even inanimate objects were held to this kind of accountability. If a man tripped over a chair and injured himself the chair was "responsible," and must be punished by being burned or broken. Until comparatively recent times animals were held responsible for injuries they committed; they were tried and convicted and formally sentenced. But ultimately inanimate things and animals came to be exempted from the ritual of responsibility, and slowly but progressively children, idiots, and finally most of the "insane" were likewise exempted. Various curious tests then had to be decided upon to determine the "responsibility" of persons suspected of "insanity," (or an "irresponsible" "insanity"). Once they were compared in appearance and conduct with wild beasts, later with the "mentality" of a 14-year-old child. This was actually the criterion of "responsibility"! Current even today in many states is slightly less hoary "right or wrong" test, persisting in spite of common knowledge that people are actuated by various compulsions to do things they themselves regard as wrong in the most shameful sense. Psychiatrists realize that the capacity to feel remorse does not imply power to control conduct.

The legal problem of responsibility evidently involves the philosophical problem of "free-will." Philosophy still debates the different issues of the question and science can hardly assume to give a final answer to them now. But the law stubbornly maintains that the question is closed. According to the law, all persons of certain categories possess absolute freedom of will, and all persons of other categories possess none. Neither science nor philosophy can accept such a conclusion.

The scientist then, really, cannot answer as to legal "responsibility," and he does not wish to participate in the ritual of "punishment." (Several members of the committee emphasize our professional interest in observing how it gratifies the craving of the crowd for atonement through vicarious suffering.) For his patients the psychiatrist seeks not retributive action, but diagnosis and scientific attempt at therapy. This, in a sense, is an "inhuman" attitude, in that it is a departure from the instinctive mechanism that rules most of humanity; the clamor for vengeance is more "human." But treatment may sometimes be as painful as the sacrifice prescribed by the legal ritual. Opening a boil or setting a fracture may be painful, and the psychiatrist, too, may prescribe painful treatment, but it is never punishment (retributive).

The committee felt, therefore, that the bill covering the question of criminal responsibility was a problem upon which there was at the present time insufficient information and insufficient general agreement. Most of the members of the committee felt that the word "responsibility," as well as the word "insanity," and other similar static concepts should be eliminated entirely and endeavor made to determine rather the capabilities and

incapabilities of the accused, or a specification of whether or not the mental status (disease, defect, trend, etc.) of the offender was likely to lead to neglect or danger to himself or to others.

For this reason the proposal of the American Institute for Criminal Law and Criminology was not wholly approved. It was regarded as a good beginning step but it has two flaws, one of which is that it perpetuates the ambiguous and metaphysical term "responsibility"; the other is that it insists upon a particular state of mind without being able to define it. The committee has given careful attention to Sheldon Glueck's excellent book on Mental Disease and the Criminal Law and recommends it to the study of all members as a presentation of the legal status of various problems involved, without particularly favoring the author's specific recommendations for legal reform.

With regard to the burning question of expert testimony, the committee was in almost unanimous agreement that the recent Massachusetts laws offered the best practical technique so far presented. The committee is favorably impressed by both the Massachusetts and California laws. Various defects will no doubt appear; it is perhaps questionable whether sufficient examination is provided for and whether there is sufficient latitude for recommendations. Psychiatrists certainly do not wish to be limited to "Yes" or "No" reports, i. e., to specify whether or not a man should be sentenced. It is rather a question of how he should be handled, where he should be kept, or what he should be given to do. The problem of sufficient remuneration is another question involved to which the committee had no time to give. That these laws have faults is certain, but they represent an enormous step in advance, and they anticipate nearly all of the defects and faults of the present system of expert psychiatric testimony in criminal trials. Whatever the precise legal procedure adopted, the committee felt it imperative that all judges be authorized (obliged) to request psychiatric advice, the examinations to be made conjointly, the reports to be made in writing, and the remuneration to be made from public funds.

The committee unanimously favored an attempt to codify the commitment laws of the various states. "Insanity" has come to mean nothing but certifiability, i. e., the desirability of enforced hospitalization. It seems quite unnecessary to have a score of different methods for determining the desirability of this step. The committee recognizes, however, the great practical difficulties in achieving this codification and has no specific ways and means to suggest.

The following suggestions were made by members of the committee in regard to possible projects for our Association in a furtherance of the aims of public education referred to above:

- (1) That the American Psychiatric Association delegate a committee to publish a volume on the present status of our knowledge concerning criminality and outline a standard procedure. This committee should cooperate with the National Committee for Mental Hygiene and the American Bar Association.

(2) That there be correlated herewith the practices in foreign countries as England, France and Germany.

(3) That a survey be made of the present work of psychiatric clinics in association with courts and prisons and the results published, particularly with reference to the practical achievements of these clinics. The public knows little enough of psychiatric theories in regard to crime, but it knows even less about the medical work that is already being done in many places; hence such a study would not only afford a convenient and much needed reference for the use of social workers, legislators, judges, psychiatrists, etc., but would also serve as a basis for the dissemination of valuable educative information to an uninformed but eager public.

(4) That the American Psychiatric Association cooperate with the National Research Council, which is already considering research problems along this line and that a representative of the American Psychiatric Association be selected to function on the National Research Council.

(5) That this association should encourage uniformity of clinical statistics in prisons through contact with the American Prison Association.

(6) That there be an obligatory published review of the cases in which members of this association testify.

(7) That an annual report of cases, clinics, and of the situation in general, be presented to the American Psychiatric Association.

(8) That The Journal of the American Medical Association be assisted by the American Psychiatric Association in presenting to its readers a comprehensive and progressive account of psychiatry and criminology with the aim of educating the medical profession itself in psychiatric and criminologic problems.

These suggestions merit further discussion.

For the present, your committee specifically recommends the following proposals for immediate action:

(1) That the American Psychiatric Association go on record as favoring certain types of legislation such as the recent Massachusetts enactment which put the psychiatrist in a position of counselling the legal authorities as to the disposal of social offenders.

(2) That the American Psychiatric Association set up, agree upon, and publish official standard qualifications of medico-legal experts, and that it maintain a published list of such qualified experts, revised annually, for the convenience of court selection.

(3) That the American Psychiatric Association, in its annual conventions, give more attention to the problem of psychiatry as applied to crime and other behavior disorders including demonstrations of the work being done in penal and correctional institutions, behavior and child guidance clinics, and psychiatric clinics associated with criminal courts.

(4) That the American Psychiatric Association foster an attack on certain pressing problems of research in this field, particularly (a) the working out of a useful nosological classification of mental orders which will take into consideration behavior pathology

not now definitely defined or classified from a psychiatric standpoint, and (b) the analysis of the medico-legal situation in the various states of this country with particular reference to psychiatry.

(5) That the American Psychiatric Association advocate the association of a psychiatrist or a psychiatric clinic with every penal institution and with every criminal court, to act in an advisory and consulting capacity without administrative duties, and that it advocate the teaching of courses in Criminology in both law schools and medical schools by psychiatrists.

(6) That the American Psychiatric Association maintain a central bureau, either in the form of a standing committee or in the form of a full-time paid secretary, to aid in disseminating to the medical and lay public, in a dignified and accurate manner, news of the actual and potential contributions of psychiatry to present-day social life, perhaps cooperating with the National Committee for Mental Hygiene. Such a bureau should publish from time to time an official bulletin containing official statements of psychiatric attitude and opinion available to newspapers, magazines and the public at large.

(7) That the American Psychiatric Association officially accept, endorse and subscribe to the following statement of the present attitude of the members of this association toward the problems now under consideration and give it wide circularization.

OFFICIAL STATEMENT OF POSITION

WE BELIEVE—

(1) THAT the psychiatrist's chief concern is with the understanding and evaluating of the social and individual factors entering into failures in human life adaptations.

(2) THAT crime is a designation for one group of such adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding, of course, certain other branches of science.

(3) THAT crime as well as other behavior and characterologic aberrancies can be scientifically studied, interpreted and controlled.

(4) THAT this study includes a consideration of the hereditary, physical, chemical, biological, social and psychological factors entering into the personality concerned throughout his life as well as (merely) in the specific "criminal" situation.

(5) THAT from a study of such data we are enabled in many cases to direct an attack upon one or more of the factors found to be active in a specific case to effect an alteration of the behavior in a propitious direction; while in other cases where this is not possible we are able in the light of past experience and discovered laws to foresee the probabilities to a degree sufficient to make possible proper provision against subsequent (further) injuries to society. By the same experience and laws we are enabled in still other cases to detect and endeavor to prevent the development of potential criminality.

(6) THAT these studies can be made with proficiency only by those properly qualified, i. e., scientists

who have made it their life interest and study to understand and treat behavior disorders.

(7) THAT this point of view requires certain radical changes in legal procedure and legislative enactment, insuring the following provisions:

(a) The court appointment, from a qualified list, of the psychiatrists testifying in regard to the mental status, mechanisms, or capabilities of a prisoner; with opportunity for thorough psychiatric examination using such aids as psychiatrists customarily use in practice, clinics, hospitals, etc.; with obligatory written reports, and remuneration from public funds.

(b) The elimination of the use of the hypothetical question and the terms "insane" and "insanity," "lunacy," etc.

(c) The exemption of the psychiatrist from the necessity of pronouncing upon intangible concepts of religious and legal tradition in which he has no interest, concern or experience, such as "responsibility," "punishment" and "justice."

(d) The development of machinery adequate to the requirements of the psychiatric point of view in criminal trials and hearings, including court clinics and psychiatrists, and ultimately a routine compulsory psychiatric examination of all offenders with latitude and authority in the recommendations made to the court as to the disposition and treatment of the prisoner.

(8) THAT this also entails certain radical changes in penal practice, including:

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(b) The release of prisoners upon parole or discharge only after complete and competent psychiatric examination with findings favorable for successful rehabilitation, to which end the desirability of resident psychiatrists in all penal institutions is obvious.

(c) The permanent legal detention of the incurably inadequate, incompetent, and antisocial, irrespective of the particular offense committed.

(d) The development of the assets of this permanently custodial group to the point of maximum usefulness within the prison milieu, industrializing those amenable to supervised employment, and applying their legitimate earnings to the reimbursement of the state for their care and maintenance, to the support of their dependent relatives, and to the reimbursement of the parties injured by their criminal activities.

(9) THAT effective preventive medicine is applicable in the field of psychiatry in the form of mental health conferences and examinations, child guidance clinics, mental hygiene clinics, lectures and literature, and similar institutions and efforts.

(10) THAT the protection outlined provide an efficient and scientific solution to the problems of crime, viz:

(a) The protection of society.

(b) The rehabilitation of the "criminal" if possible.

(c) His safe and useful disposition or detention if rehabilitation is impossible.

(d) The detection and the prevention or deflection of the development of criminality in those potentially predisposed.

Respectfully submitted,

ADLER
BRIGGS
GLUECK
HEALY
JELLIFFE
KIEB

LOWREY
SALMON
WILLIAMS
WHITE
MENNINGER

Book Reviews

THE TREATMENT OF FRACTURES: WITH NOTES UPON A FEW COMMON DISLOCATIONS. By Charles L. Scudder, M. D., Consulting Surgeon to the Mass. General Hospital, formerly Assistant Professor of Surgery at the Harvard Medical School. Tenth edition, revised. Octavo volume of 1,240 pages, with 2,027 illustrations. Philadelphia and London; W. B. Saunders Company, 1926. Polished buckram, \$12.00 net.

In this edition many chapters have been revised and others have been very much enlarged by the addition of new material. The author has attempted in this edition to present the present knowledge of the non-operative and the operative methods of treating fractures.

PHYSICAL THERAPY IN DISEASES OF THE EYE, EAR, NOSE AND THROAT. By Abraham R. Hollender, M. D., and Maurice H. Cottle, M. D., New York. The Macmillan Company, 1926.

Physical Therapy is fast gaining official recognition as a legitimate and valuable discipline.

This volume is an attempt to systematize and classify the available material in eye, ear, nose and throat specialties and to invite attention to the unlimited therapeutic possibilities in these particular fields.

THE DUODENAL TUBE AND ITS POSSIBILITIES. By Max Einhorn, M. D. Second edition, revised and enlarged. Illustrated. Philadelphia. F. A. Davis Company, 1926. Price \$3.00.

This edition appears in a revised and enlarged form. The newer investigations with—and the further elaborations of—the Duodenal Tube have been daily incorporated in the present volume.

A MANUAL OF PROCTOLOGY. By T. Chittenden Hill, M. D. Second edition, thoroughly revised. Illustrated with 101 engravings. Philadelphia and New York. Lea & Febiger, 1926. Price \$3.50.

This edition is carefully revised. The author has corrected the slight errors found in the first edition and has rewritten many sections in order to add clarity and to give more detailed descriptions of technic.

THE DENTAL ASSISTANT. By Emma J. McCaw, R. N. Illustrated. St. Louis. C. V. Mosby Company, 1926. Price \$1.50.

This book aims to help the woman assistant to render efficient aid to the dentist with whom she is associated and as an aid to the doctors whose duty it is to teach the new assistant.

Original Articles

RADON (RADIUM EMANATION) IN THE TREATMENT OF INTRA-ORAL CANCER*

FRANK EDWARD SIMPSON, M. D., and ROY
EMMERT FLESHER, M. D.
CHICAGO

At the present time the general opinion appears to be that the problem of the cure of deeply situated and inaccessible cancer will not be solved either by surgery or by irradiation.

Some believe that a cancer cure may be developed along the lines of immunity, i. e., the organism may be made resistant to the cancerous process.

G. Fichera¹ of Italy has inoculated fetal tissue to determine if the organism can be made immune to cancer just as smallpox is prevented by vaccination.

It would appear, however, that the difficulties of proving that one can be "vaccinated" against cancer are insuperable.

Some hope that a substance may be discovered which, when injected into the body, may be fatal to the cancer cell.

W. Blair Bell² of England has used for this purpose injections of lead. While several of Bell's cases have died of lead poisoning, he believes that 30 cases have been cured. Up to the present time the exact technic used by Bell has been kept a secret.

The best practical means that we now possess of combating cancer are surgery and irradiation.

In the treatment of intra-oral cancer, two phases of the disease must be considered—the intra-oral lesion and the lymph nodes of the neck.

In the treatment of the intra-oral lesion we believe that slightly advanced and accessible lesions may be excised.

Advanced or inaccessible lesions should be treated with radon. Radon (radium emanation) is a gas and is extracted from a solution of radium by means of a special apparatus.

At least from 1½ to 2 grams of radium element should be contained in the solution used for this purpose. The rays given off by a tube

of radon are identical with those given off by a tube of radium. Radon, however, decays quickly, losing 16 per cent of its power every 24 hours. One great advantage of radon over radium is that one may easily concentrate over a small lesion at least 1000 mc., a procedure that is necessary to success.

In the treatment of the intra-oral lesion we have used two methods—surface irradiation and intra-tumoral irradiation.

Tumors that are more than 2 or 3 cm. in diameter, poorly defined or in close proximity to bone, large vessels or nerves, should be treated by surface irradiation.

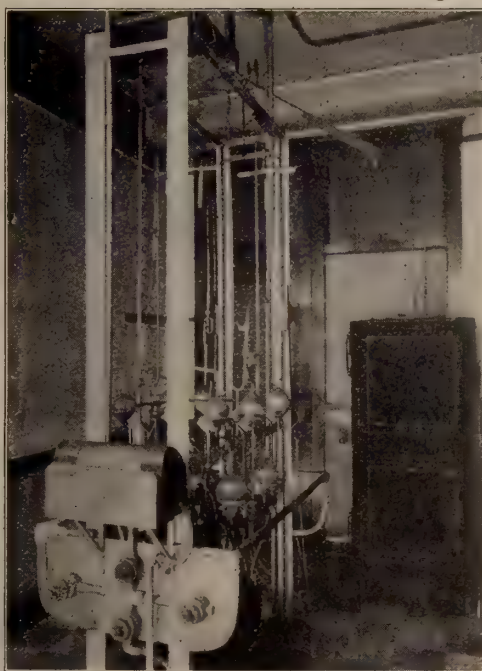


Fig. 1. Radon (Radium Emanation) Machine. Constructed in 1919.

Lesions that are less than 2 or 3 cm. in diameter and are well localized may be treated by the intra-tumoral method. Intra-tumoral irradiation is always preceded by surface irradiation in order to minimize the danger of metastasis.

Tumors involving important anatomical structures, such as the soft palate, are treated by surface irradiation.

Tongue lesions are treated by the intra-tumoral method.

Lesions that are favorably situated as, e. g., cancer of the buccal mucous membrane should

*Read before the Section on Surgery, Illinois State Medical Society, Champaign, May 19 1926.

also be irradiated from the external or skin surface so as to get a "cross fire" effect.

In using surface irradiations we usually prepare an applicator to fit the lesion. The applicator should contain not less than 1000 mc. At a distance of 2 mm., 1000 mc., screened with 2 mm. of silver, may be applied for 15 minutes.

In using intra-tumoral irradiation, a number of small glass tubes, each containing from 0.5 to 1 mc. of radon are buried 1 cm. apart evenly throughout the lesion by means of a sterile needle containing an obturator.

From 5 to 40 or more tubes may be required. The bare radon tubes are allowed to remain in the tissue until they slough out or become permanently encysted.

Considerable judgment must be exercised in determining which method to use. Unfortunately many cases come too late for anything more than palliation.

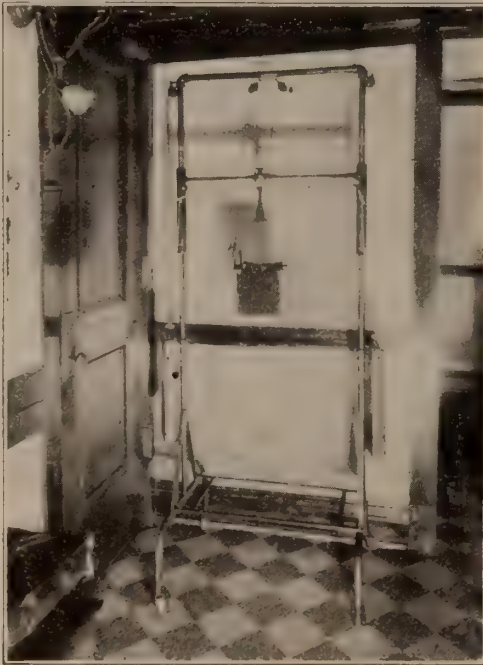


Fig. 2. Movable Lead Shield for the Protection of the Patient.

The lymph nodes of the neck. In treating lymph nodes of the neck, the general principles underlying irradiation may be considered. There are two methods of irradiating the lymph nodes—by implantation of weak tubes and by distance irradiation with large quantities of radon.

Theoretically, one may implant weak radon

tubes in the lymph nodes of the neck with or without an incision. In using the implantation method, reliance must be put solely on the beta radiation. Beta radiation is not effective in killing cancer cells for a greater distance than about $\frac{1}{2}$ cm. from the tube. In order to be successful, therefore, one must implant the entire area har-



Fig. 3. Movable Lead Angle Plate for the Protection of the Operator.

boring cancer cells with radon tubes 1 cm. apart, otherwise some cancer cells may escape and recrudescence may occur. We believe it is practically impossible to implant tubes in every area in the neck harboring cancer cells. Tubes implanted too near the surface may cause sloughing of large masses of skin. Tubes implanted near large nerves may cause intractable neuritis and if implanted near large blood vessels, serious hemorrhage may occur. Several cases in which large areas of necrosis have occurred in the neck from the implantation of radon tubes in lymph nodes have come under our observation.

We believe, therefore, the implantation of radon tubes in lymph nodes should be undertaken with the greatest caution, if at all.

Great harm is being done at the present time by the reckless marketing of radon tubes for use by the inexperienced.

2. *Distance irradiation.* While our technic has naturally varied somewhat from time to time, our usual procedure is as follows:

Blocks of soft wood, which may measure 4x4x4 cm., are used as radon carriers. One of these blocks is strapped to the skin. A flat metal box holding from 20 to 50 tubes, which should contain at least from 500 to 1000 or more mc. of radon, is then strapped to the superior surface of the block. At a distance of 4 cm., 7000 mc. hours may be given. We have devised special lead shields for protecting both the operator and the patient when large quantities of radon are being used.

Allowing for the variation in the malignancy of different cases, we believe that about 10 per cent of cases, in which the disease is apparently established in the lymph nodes, but is still operable, may get clinically well. Cases in which the submaxillary nodes alone are involved are the most favorable. When there is extensive involvement of the cervical or submental nodes or when more than one group of nodes is affected, palliation is all that can usually be accomplished.

In many cases delay of the carcinomatous process in the nodes for considerable periods of time can be brought about by careful irradiation.

REPORT OF CASES

Between December 31, 1919, and December 31, 1924, we treated with radon 141 unselected cases of intra-oral squamous cell epithelioma.

Cases in which the lips or the bones were involved are not included. We shall only report at this time the results in 56 unselected cases which were treated during a period of three years prior to December 31, 1922. The clinical diagnosis in each of these cases was confirmed microscopically.

As we have made a detailed report of these cases elsewhere, we shall limit our present report to a fw of the main items of interest.

Age and Sex. The average age was 58.7 years. There were 52 males and 4 females.

Site of the Lesion.

Tongue	9 cases
Floor of mouth.....	3 cases
Buccal mucous membrane.....	17 cases
Superior maxilla	8 cases
Inferior maxilla	7 cases
Palate and tonsil.....	12 cases

Results. Of the 56 cases we know the end results in 39, which have been carefully traced; 21 of these cases had definitely palpable lymph

nodes of the neck at the time of treatment, while in 18 cases no nodes were found.

Patients Without Nodes. Of the 18 patients without nodes, 14 (77.8%) are living; 4 have been well for over 5 years, 5 for over 4 years, and 5 for over 3 years.

Four patients are dead. One of these lived for nearly 2 years and 3 lived for over 3 years after the treatment. All 4 died of recurrence.

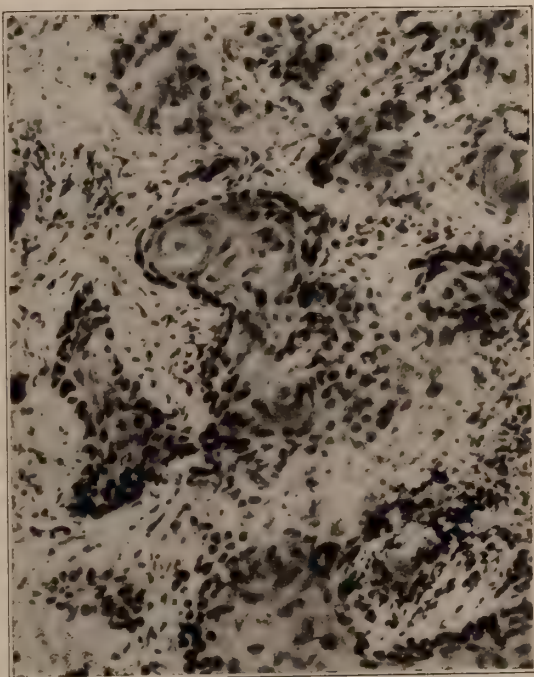


Fig. 4. Section taken Dec. 2, 1921, from squamous cell epithelioma of tongue. Section shows epithelial pearls and round cell infiltration; magnified 225 diameters; patient, treated by surface irradiation and the implantation of bare glass tubes of radon, was clinically well four years and five months later (May, 1926); patient, aged 42, referred by Dr. V. L. Sheets of Chicago.

Patients With Nodes. Of the 21 patients with nodes, two are living, one having been well for over 5 years and the other for over 4 years.

The duration of life after treatment of 19 patients who have died varied from 4 months to 3 years, the average duration being 16.4 months.

Results in Cancer of the Tongue. Of the 9 cases with cancer of the tongue, 4 are living. These 4 cases have been well for 5 years, 4 years, 3½ years and 3 years, respectively.

Of the 5 cases who died, 2 were free of cancer at the time of their death, one having been well for over 4½ years and the other 1½ years.

General Results. Assuming that the 17 untraced patients are dead, the total mortality is 63.3%; 20 (35.7%) out of 56 patients have been well for periods of from 3 to 5 years.

Conclusions. For the best results in intra-oral cancer, at least 1,000 millicuries of radon must be available while experience in its use would appear to be necessary.

DISCUSSION

Dr. Harold Swanberg, Quincy: Dr. Flesher is to be congratulated on the splendid results he has secured with radium in intraoral malignancy. His statistics prove better than anything I can offer just what can be expected from radium in these conditions in expert hands. In fact, I do not hesitate to state that the statistics that have been presented today are the most encouraging I have heard for mouth malignancy.

Intra-oral malignancy is one of the most distressing and fatal forms of carcinoma we are called upon to treat. Of the various locations in the mouth, cancer of the lip offers the best prognosis and that of the tongue the worst. Some of the disadvantages of treating these conditions are: 1. They grow rapidly and involve underlying structures early; 2. They metastasize early; 3. They are more resistant to radiation, and 4. They are kept constantly moist by infected fluids and light and air are excluded. These conditions promote infection and hinder the repair of the ulcer left after the lesion is destroyed by irradiation. For the reasons just mentioned the treatment of carcinoma in the mouth is much more difficult and the prognosis much less favorable than is the case with similar lesions located on the skin surface. Added to this is the fact that these lesions are usually in locations where it is difficult to approximate the radium accurately and painful to keep it there. When all these drawbacks are considered it is small wonder that one finds little to boast of in the results obtained. There is one consolation left, however, and that is, no other form of treatment offers any better results. Surgery is seldom seriously considered in extensive intra-oral malignancy. The actual cautery is better but leaves much to be desired. Electro-coagulation in the hands of a few has given very good results, but usually must be supplemented by radium. Under such unfavorable circumstances the choice of radium treatment might be looked upon as making the most of a bad bargain.

I am far from agreeing with Dr. Flesher in the manner and method of using radium in these growths. Especially do I disagree with his statement that 1000 mc. of radium are necessary. We heard some talk today about reducing the expense of diagnoses. I think this statement is just as true in regard to treatment. If it is true that we must have 1000 mc. of radium to satisfactorily treat mouth malignancies, then there are only a few institutions in this country where this treatment can be obtained. With the present cost

of radium most patients would, therefore, be unable to secure this treatment.

Furthermore, the use of bare emanation tubes has a number of very serious objections. They are being used less and less and from present indications it would appear that in a few years' time we will hear little about them. In fact, many of the leading radiologists of this country seldom use them. Bare emanation tubes cause surgical trauma, increase the possibility of metastasis and the danger of infection. In addition, they permanently leave a foreign body at the site of the lesion, which in itself may prove irritating and which does not appear to be a rational way of treating a malignancy. Radium needles to be inserted for a number of hours and then removed are less objectionable and even these are being used less frequently by leading radiologists, such as Pfahler, Pancoast, etc. The proper method of radium treatment in mouth malignancy has not yet been settled, though much discussed among radiologists.

Recently radium emanation in gold implants has been advocated in mouth malignancy, but it is too early to state what may be expected from this method.

Dr. C. W. Hanford, Chicago: I was very much interested in Dr. Simpson and Dr. Flesher's paper. I wish to revoice the sentiments expressed by Dr. Swanberg in regard to the necessity of a large amount of emanation in the treatment of oral cancer. It might be very discouraging if our doses of 200 mg. of radium be considered too small and we did not have 1000 mg. The only advantage that one can have in doses of 1000 mc. is a shortening in the time of radiation. We are going to get the same result if we understand our radiation with a smaller amount of radium.

I agree, too, with Dr. Swanberg in regard to implanting the bare seeds and leaving them in contact with the interior of the mouth. All cases of intra-oral cancer that come to us with lymph nodes that are distinctly palpable are absolutely doomed in the majority of instances. The original lesion may be controlled and may heal but the lymph node is the thing that is going to bother the life out of us and eventually end the disease and the patient.

I agree, too, in regard to the use of contact applications to the tongue. It is almost impossible to make contact application to the tongue cases because of the very nature of the organ. It would not keep in contact. There it is absolutely necessary to use the needle. I am very much in favor of needles containing 5 to 10 mg. of radium implanted a centimeter apart and left a certain number of hours, so each centimeter receives from 400 to 500 mg. hours.

The cancers that are implanted on the top of a gumma are rather interesting. You may not be able to do very much with radium until you have instituted specific treatment along with it. That should always be taken into consideration and a Wassermann should be done in these cases to see if we have any contributory cause to the condition.

In cancer of the tongue without lymph nodes we have a rather pleasing prognosis. Dr. Swanberg stated

that cancer of the lower lip is perhaps the most pleasing prospect for radium therapeutics, because there you can do something definite and we get in the great majority of cases very definite healing.

Dr. Carl Beck, Chicago: This is a very interesting paper and it brings the question of radiation for the cure of carcinoma into discussion. Looking over all the past experiences in this line, we have all come to the conclusion that carcinoma in the advanced stage is not cured, that in the early stage when it is localized to one small point that can be reached with radiation it is curable. The means, of course, are variable. It makes very little difference whether you use radium, hot irons or the knife as long as the precaution is taken that it be not spread and as long as it can be radicated in its early stage it is curable. That explains why a carcinoma with glandular enlargement offers a poorer prognosis than carcinoma without glands, but glands palpable and non-palpable are only relatively different. Sometimes when they are not palpable they are affected. Radium is far more reaching than the knife and therefore should be used as an accessory means of treatment, but even the knife can achieve that. I often point to a case that was operated on 18 years ago in which I did a very radical operation, removing the whole shoulder girdle. The patient was one of our prominent officials of the city of Chicago and the case had been given up by many of the best surgeons. That brings us to the question of whether carcinoma can produce immunity or is it a disease that starts locally and spreads gradually to the lymphatics, blood vessels and so on. Looking over my own experience and talking with different surgeons in the different countries, I am of the opinion that it starts as a local affair and that there are predisposing causes, predisposition in the way of the blood serum and sometimes that adds to the possibility of the development in certain local position, whether this local position is immune or whether the disease finds some other favorable position to which it will spread.

I see no objection to the methods of radiation. As to their effect, they are on a par with the other methods of treatment.

Dr. R. E. Flesher, Chicago (closing the discussion): I wish to thank Dr. Swanberg, Dr. Hanford and Dr. Beck for their discussion of our paper.

In closing I wish to emphasize one or two points. One is the importance of using large quantities of radon. This in our opinion is of the utmost importance in order to obtain the best result by surface contact application. Because of the dangers already mentioned we favor surface contact application in all intra-oral cases except cancer of the tongue, in which we believe the ampoules should be implanted in addition. The question of expense is an important one, but we are dealing with an affliction that threatens the patient's life, so I do not believe the question of expense should be considered. Yesterday Dr. Jackson in the course of his talk on cancer of the breast emphasized the danger of metastases due to rough handling. This I believe

is equally true of cancer in any part of the body, particularly in intra-oral cancer. Due to the location of the lesion, squeezing and massaging by the patient undoubtedly results in early embolism of cancer cells to the adjacent lymph glands.

The question of using gold implants instead of glass or bare tubes is comparatively new. The objection to gold implants would be the danger from traumatism and being larger, require the use of a larger needle to introduce them.

Dr. Swanberg objected to leaving a foreign body in the tissues. This would be equally applicable to the gold implants. The bare glass ampoules are very small and have never caused trouble in any of our cases.

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WHEN THE DOCTOR DIES, WHAT DOES HE HAVE TO SELL?*

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The realization of what is advocated in this paper will be challenged upon three points:

1. That it is impractical.
2. That the family doctor will refuse to do the work.
3. That it is illegal.

An intelligent discussion of the above points will be beneficial both to the public and the profession.

The permanence of medicine, its evolution and progress, has been and is dependent upon teaching institutions; either schools or hospitals; the activities of medical societies, county, state and national and the various societies devoted to the study of the specialties of medicine and surgery. In the history of medicine there have been a number of men in private practice, not connected with school or hospitals, who have contributed great things both in the field of medicine and surgery; but these exceptions do not disprove the fact of the foregoing statement.

When the family doctor dies there is nothing to sell. The business of a life time is dissipated instead of continued. This is both an economic and scientific loss. Three parties suffer from the economic loss. The patient, the physician's family and the physician who would be able to

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purchase something tangible that would insure the patronage of a goodly number of patients who had employed the deceased physician.

The financial loss to the doctor's estate is evidence of his short-sightedness in having taken no steps to insure the continuance of a life's work, the scientific and business aspect of which in the present advanced stage of the practice of the healing art has so greatly overshadowed the spiritual and artistic. Not only evidence of short-sightedness but seeming evidence of lack of pride in his profession.

In the small towns where the population increases slowly, the number of physicians necessary to serve the community is well known. A newcomer seldom attempts to compete with those physicians who are already established. It is only when one of these moves away or dies that another physician enters the field, vacated by removal or death.

The new physician may or may not buy the departed doctor's office or home. If he does, the library, the meager furnishings and the few instruments are thrown in for good measure. The purchase price is the real estate value and nothing is paid for the business.

In the large cities where the doctor's practice is not confined to the immediate location of his office, there is nothing to sell.

His mailing list represents a few open and a large number of closed accounts; certainly not an alluring tie to bind the bereft patients to a new and strange doctor.

The physician in the teaching institutions may be a man of ordinary ability; but having left a record of his doings, he has made a permanent addition to the progress of medicine. The general practitioner, who keeps no records and who does not teach, has, to that extent, failed in his duty to his chosen profession.

There has never been a time in the world's history when the public was so well safeguarded in matters of health as it is at the present time.

Most of the weak medical schools have been out of existence for nearly twenty years. Those physicians who practice medicine now are nearly all equipped to render first-class service to their patients.

The meager scholastic training of the old-time general practitioner was not one that encouraged him to make careful and complete physical ex-

aminations. He felt that his knowledge of the normal was so limited that modesty forbade expressing an opinion for which he could honestly expect any one to pay.

He left the portals of the medical school with a more or less inferior educational equipment and a strong determination to go out and battle with disease. Considering his limitations, he fought a good fight; but with the progress of medical and allied sciences a large number of diseases were curtailed or banished. Medical standards were raised and graduates were turned out prepared to make physical examinations and to properly interpret findings. These and succeeding classes are the men who now constitute the medical profession. Most of them are general practitioners. A large number do both general and special work. A few confine themselves strictly to their chosen specialty.

The medical profession has not fully awakened to the fact that it has goods of great value to sell, both to the well and to the apparently well. For the most part the public is entirely ignorant of the necessity of making purchases in the line of health until their physical ills have grown to such an extent as either to interfere with their work or cause them great discomfort.

The campaign for periodic health examinations has not aroused much enthusiasm on the part of the general practitioner.

We must confess that in taking up things that are new the policy of our profession has been, "Yet a little sleep, a little slumber, a little folding of the hands to sleep."

This indolence is partly responsible for the encroachments of health departments and the attempts of corporations to practice medicine.

The general public believes that only a few high priced specialists have the knowledge to make either partial or complete physical examinations. There was a time when this was true. Those were the days when the general practitioner listened with unaided ear to heart and lung sounds, with the patient fully dressed; when few of them were able to manipulate a reflected light and an ear speculum in a manner that would reveal the ear drum; when there was hardly a general practitioner who could use the ophthalmoscope or laryngoscope.

We cannot conceive of any student, emerging

from a present-day medical school, being incompetent in any of these things.

Periodic health examinations mean the taking of careful histories and the making of systematic and painstaking physical examinations. Those examined will understand the necessity of having the doctor preserve their records for future reference.

There are comparatively few instances in the United States of doctors keeping worth while records of patients in their private practice. Neither have they made and recorded a large enough number of complete and careful physical examinations to make their findings of much value.

The keeping of proper records involves a great deal of extra work, requires facilities for filing, and cannot be done on anything but a small scale without the aid of a secretary.

To keep proper records means either a financial sacrifice on the part of the doctor or a fair and commensurate fee on the part of the patient.

At the present time comparatively few physicians are being paid for this work. Those who are paid, are for the most part men who restrict their activities to consultation work. The public is not accustomed to see the general practitioners make records of this kind, and until knowledge of his ability to do so is generally disseminated, it will resent any attempt upon the part of the general practitioner to make an extra charge for this service. The education of the public must be done, for the most part, by the family doctor. So long as so many of them are unwilling to devote time and effort to this work, so long will public education be neglected. Buyers seek the marts that sell the goods desired. The oldtime family physician had a woefully limited stock. The family physicians of the present have full warehouses, but no market.

To be a doctor's doctor is the ambition of some physicians. Their personality and mental attitude make it difficult for them to gain and hold the confidence and esteem of people in general. They lack the ability to arouse that sentiment, which, in politics means for the individual the support of the public. But the doctor's doctor, or, as he is more generally known, the specialist and consultant, will be numerically much less when the people's doctor capably performs a large part of the work that was formerly left to

the specialist. This, however, does not apply to surgery. Whether we like it or not, the time is not far distant when no one will be doing surgery who has not served a long and arduous apprenticeship. This does not mean that the surgeon is a superior being. Great manual dexterity and greatness of mind are seldom found together. The men who conceive the cathedrals do not carve the stones.

Periodic health examinations and constant supervision will tend to prevent many conditions which now demand major surgery. Periodic examinations and continuous supervision will require so much time and will result in so much better financial returns that the temptation for the family doctor to do surgery will be greatly lessened.

During his hospital internship the medical graduate's closest associations are with specialists, whose patients are transients. From such associations he is liable to acquire an attitude detrimental to the establishment of a permanent following. He becomes more or less intimately acquainted with the patient's disease, but remains a total stranger to the patient.

The physician whose entire time is given either to diagnostic or operative work can afford to hold himself aloof because his ministrations, whether marked by success or failure, are of short duration.

The general practitioner who is the real internist cannot, in justice to his patients, abruptly sever his relations with the patient's family when recovery or death crowns his efforts. Sympathy may play little part in correct diagnosis, but it plays a prodigious part in administering proper treatment and holding a clientele for a number of years.

People are still firm in their belief that the doctor who holds their confidence is better qualified to serve them than is the one who has not treated them. This belief has a foundation in fact and its nearness to truth is in direct ratio to the ability of the physician and the amount of attention and thought he has given to physical and mental problems.

The specialist is the pioneer, who by his concentration, has explored and reclaimed new fields that yield health and happiness; fields, that before his coming, were closed chapters of misery and untimely death.

That the family physician is to become a thing of the past is a foolish and false belief. Unprogressive products of the old time inferior schools will have passed away, but their places have been and are being taken by men whose acquaintance-ship with the broad field of medicine renders them able to diagnose and properly treat a large number of conditions which would in times past demand the attention of specialists.

The picture of the future is not a large number of specialists and a few general practitioners, but rather, a large number of general practitioners and few specialists.

A diagnosis that is to be of benefit to the patient is no longer restricted to the discovery of the dominant ailment from which he suffers. It must also include a record of minor departures from the normal, which are sometimes contributing causes to major disturbances and often times formidable barriers to a return to health.

The gastric or duodenal ulcer may be kept active or renewed by the infection of a single tooth. A beginning pulmonary tuberculosis may prove refractory to treatment because of infected tonsils.

It may not be wise to inform the patient of all the departures from the normal lest their presence be given an importance that will cause unnecessary alarm. These details are for the guidance of the examiner and can serve no useful purpose to the patient.

It is not possible to render complete and satisfactory service to a patient suffering from other than transitory illnesses except by obtaining a systematic and detailed history and supplementing it by a carefully written description, recording both the normal and pathologic findings of the various organs.

It is not sufficient for teachers in medical schools to tell students to make careful examination of every patient who seeks their advice, but it is necessary to impress upon them the fact that part of their office equipment should be some device, no matter how simple, for the proper filing and keeping of case histories, with physical and laboratory findings written in detail.

In the beginning of his career the doctor will have an abundance of time to obtain and write such records. It is not likely that he will receive a large enough fee to make it seem justifiable for the time spent in making and recording a

proper examination, but it is certain that if he persists in practicing medicine in this way the time will arrive when he will be well repaid for his endeavors.

So long as it is not the universal custom for the family physician to take histories in this manner and make detailed examinations, it will be difficult for the public to see the necessity of so doing. Until periodic health examinations have become a matter of course, complete records of all patients will not be made. When periodic health examinations become an established custom, both fairness to the patient and courtesy due from one doctor to another, will make available the laboratory findings to the physician whom the patient may consult for confirmation of diagnosis and further advice. It is perfectly right and proper that the physician who made the original examination and has the laboratory findings should give them to his successor, but he should receive, for furnishing copies to his fellow practitioners, a reasonable fee of not less than five dollars. This should be a standard practice, well understood by the public. In the case of transfer of property, people make no protest at having to pay for information their attorneys feel the necessity of obtaining from those who hold records of property transactions. This is because attorneys long ago had the business foresight to establish this custom as a rightful procedure.

Is it not possible that if the tales of rural communities failing to support a physician in their midst are true, that the fault is the doctor's rather than the community's? The percentage of intelligence is certainly no less in the rural than the urban population.

We have been hearing a good deal about the recent graduate in medicine who has spent eight thousand to ten thousand dollars and seven years of that portion of life's span that is marked by great physical vigor and mental alertness, being unwilling to take up the practice of medicine among ordinary people who are only able to pay ordinary fees, fearing that in so doing he is following the road to oblivion and small financial returns.

We know that a professorship and a staff position in a great hospital offer great opportunities for fame and fortune; but we also know that fame and fortune do not come to all whose feet

are traveling that road. We believe that in most instances the same measure of success will crown the efforts of the physician, who, among ordinary people of ordinary means, will give to each patient the same service that he has learned to render within the walls of the hospital.

Too many physicians have the mistaken idea that most people cannot afford to pay for good service, and are not scrutinizing their patients closely enough to discover minor defects that should be corrected.

Neither do they make an effort to learn of the many habits of life, detrimental to the patient's health, that a course of instruction will correct. Such instruction in many cases requires weeks and sometimes months, as in the case of pulmonary tuberculosis, which in its early stages is practically always clinically curable; or in diabetes, where the patient should be examined and advised at frequent intervals for many years.

It is not possible to remember all the findings that a painstaking and careful examination has shown. These findings must be recorded and if patients are to derive full benefit from subsequent visits, the record must be readily available and carefully reviewed.

The hospitals are the custodians of a certain number of such records. Histories in these cases are hurriedly written by internes who have not had sufficient experience to write a searching history.

The propriety of hospitals, private or public, having in their files complete records of the life history of our citizens, is questioned by many physicians who believe it a wrongful invasion of personal rights.

Aside from this question, the accumulation of these records adds a financial burden to the hospitals out of keeping with the benefits derived.

While it is true that for its own protection as well as that of the physician, the histories should preserve a record of the illness which brought the patient to the hospital and all that was done medically and surgically during the patient's stay, such a record would not be open to the objections cited above.

Both profound and superficial thinkers are pronouncing funeral orations over the imaginary body of the family doctor.

They see in the immediate future a medical profession composed of specialists. I can only

say that for learned men their conclusions are remarkable for their stupidity.

The criticism that the modern medical school is educating specialists, not general practitioners, is not correct. It is true that a great many men, when they have finished their hospital internship apprentice themselves to some leader in one of the specialties without laying the foundation of at least five years in general practice that is necessary to the making of a safe medical adviser. This mistake will be corrected in time, either because the overcrowding of the specialties will compel those men to go into general practice in order to make a living or by refusal on the part of the specialists to accept as an apprentice any man who has not had the experience of a general practice as a background for his future labors. Economic laws will help solve the problem.

The odium which attached itself to the name of family physician, because the oldtime family doctor depended entirely upon what his five senses told him, whose sole ambition and mission in life was to treat disease; who had no conception that the human body, like any other machine, was in need of constant supervision and frequent repairs, will pass into the oblivion of long beards and supposedly expert guesses.

The modern medical school is turning out, not only the family doctor of the future, but it has already turned out the family doctor of the present, who is perfectly capable of diagnosing departures from the normal in any of the tissues, is able to distinguish between the trivial and the serious, is able, better than anyone else, to correlate his findings and know what he can, in the best interest of the patient, treat himself and what must be referred to the specialist.

Specialists we must have for certain types of work, but their number, because of the increased capabilities of the general practitioners, will be greatly curtailed.

In making this plea for complete histories and recorded, detailed physical examinations, I do not want you to think that I am in favor of burdensome and cumbersome reports, reports that are wasteful of time and storage space.

But do not forget that the public is firm in its belief in the superiority of the physician who, because of long service, "understands my case."

You are fitted to do exactly what the consult-

ants are doing. If your skill is less it is from want of practice. They have become wise and skillful by making wholesale examinations and recording their findings. Their material is in clinics and endowed hospitals. It is there in such quantities that they can only give personal attention to a comparatively small number. Your material comes to your office and calls you to the homes. The interest of the clinic and charity hospital patient is, in most instances, concerned with the reputation of the clinic or hospital, not in the physician or physicians whose services are obtained. If you will ask these patients who treated them, in a great majority of cases they will tell you they do not know the doctor's name. Your patients know your name and if you will give them the same service in the way of examination and diagnosis that is sought by those going to clinic and hospital, your reward will be great, for if you have done your work well, the greatest and most learned professor in the land cannot dispute your findings nor give the patient different advice.

The question of compensation must ever remain an individual matter. Some physicians, because of school or hospital connections and a high regard for the value of their services, demand and obtain high fees. Others, occupying similar positions, are more modest in their financial expectations. But the general practitioner must face the fact that lacking school and hospital connections, whose advertising value is immense, he must be content with somewhat smaller financial returns, until professorial examinations by general practitioners are a universal procedure. And lastly, bear in mind that the average time of taking a careful history and making a careful, complete physical examination is two hours. It is a nervous and physical strain and the doctor who makes more than four such examinations a day will not be able to do justice to the work. Therefore, you can understand that this service cannot be rendered for the established price of an office or house visit, for in addition, the expense of the laboratory findings, sometimes both clinical and x-ray, must be borne in mind.

When the diagnostic methods of the specialists are carried out by the general practitioner, then the specialist's fees that are unreasonable will come down and the general practitioner's fee

will be advanced to a sum in keeping with the time and knowledge expended in making the examination.

It can be readily seen that records of this kind handed down from generation to generation, will be of the same priceless value as are the records of Chicago real estate held and jealously guarded by the Chicago Title and Trust Company. From such records, studies can be made of heredity that will go far towards educating the public in the proper selection of wives and husbands.

Forty years ago boys and girls had no hesitancy in marrying those suffering from either active or latent tuberculosis. Today, even ardent and inexperienced youth hesitates before making alliances with those who are thus afflicted.

Another value of permanent and well written records will be the development of esteem and high regard which coming generations of physicians will of necessity hold for their medical forbears. At the present time only the shining lights of the dead and gone past are recognized by the medical profession.

It must be understood that it will be several years before complete records of all clients will be made. Complete records will not be made of all clients or patients until the public understands that it is a matter of routine, just as they understand that vaccination against smallpox is a wise and necessary provision for their protection. Until that time comes we must be content to make the completeness of our records conform in each case to the dictates of common sense. It may be that for many years the greater number will be short and incomplete, but if we will persist the time will soon come when all our patients will be anxious and willing to have complete physical examinations in all that the word implies.

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THE RELATION OF DENTIST TO PUBLIC HEALTH*

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Some one has said that any plan inaugurated by the medical profession, towards the betterment of health conditions, to be successful must carry with it the cooperation of the dental profession.

*Read before the Illinois State Medical Society, at Champaign May 18th, 1926.

It is my privilege, speaking on behalf of the dentists of Illinois, to assure the physicians that the dentists are in hearty accord with any practical plan that may be adopted toward such ends.

Hatton has said that nothing has happened in recent years to dignify dentistry more than the development of the theory of focal infection.

While here and there in the writings of medical men, reference has been made to the passing of symptoms and apparent cures after the extraction of abscessed teeth, it really remained for Dr. Hunter, the eminent English surgeon, to cast the first Phillipic, that aroused both professions to a realization of the importance of healthy, sound, vital teeth and investing tissues. At that time Dr. Hunter directed his attack upon American dentistry as practiced in England, because he found the same strains of bacteria in cases operated on that were present in and around infected teeth of the patient. Dr. Hunter later withdrew the indictment against American dentistry, as alone being at fault, but still held that many of the primary foci of infection had their origin in the teeth.

Thus was started, to swinging, the pendulum of oral infection until the treating and crowning and bridging of teeth were taboo and the dental profession, urged on by the medical profession, entered upon a wild and merciless debauch of ruthless extraction of teeth as a panacea for almost all the ills that human flesh was heir to.

Most fortunately, in this instance, as is usually the case, there were many conservative men in both the medical and dental professions who could not be rushed and who set themselves studiously to the task of solving the problem of oral infection.

As a result of such research the craze of wanton and reckless extraction of teeth was abated and now thousands of people who formerly were doomed to finish out their lives, edentulous, depending upon artificial dentures, entirely, for the mastication of their food are now enjoying good health and natural teeth.

Dr. Charles Mayo in an address before the Chicago Dental Society nine years ago made the statement that approximately 40% of those appearing at their clinic, requiring surgical treatment were there because of primary infections of the teeth and tonsils and added that much of the tonsillar infection was secondary to that of the teeth. In closing he stated as his opinion "that,

the next great movement in medicine and surgery must be made by the dentist, will he be equal to the task?"

Paraphrasing General Pershing's remarks before the statue of General LaLayette in France.

The Dental Profession of Illinois says to the Medical Profession of Illinois.

"Doctors we are here!"

Dentistry bids fair to again becoming a specialty of medicine, and to consummate and hasten that much to be desired status, the leaders of thought and education in Dentistry have assiduously set themselves to the task, having raised the preliminary requirements until now in addition to graduation from an accredited high school a student must take one year pre-dental and four years of regularly prescribed dental studies.

This will insure a class of dental practitioners who can ably cooperate with the physicians in all matters pertaining to health.

It would be a needless waste of time and words, to go into detail before a body of physicians, explaining the dangers of infected teeth and the importance of diet pre and post natal, as that is fully understood by everyone present.

The important thing as we see it, is how are we as professional men going to coordinate our activities, that we may better serve the public.

Notwithstanding all the paths, practors, masseurs, healers and what nots, it remains to be said that there are but two professions that are qualified by training, education and experience to intelligently and adequately deal with community health problems.

No matter what objectors may say it remains for the medical and dental professions to assume the responsibility.

Various arguments have been advanced against free clinics, some claiming that it will lead ultimately to State Medicine and Dentistry and is conducive to mendicancy; but all experience has disproved those claims.

The fact remains that the greater interest that we take in the care of our worthy poor and in promulgation of the propaganda of better health, bodily and orally to the entire public, the farther will we get from the clamor of State Medicine.

We all know what a fizzle it has been wherever it has been tried and how ruinous it has been to the professions.

It behooves us to get behind the movement as

it is already organized by the lay educational committee of the State Medical Society and the Mouth Hygiene and Public Educational Commission of the State Dental Society and work to the ultimate goal that the message of better health may be broadcasted to every community in our State.

There is much work for all of us; in fact, we have as yet scarcely laid a working foundation.

We believe there should be a full time dentist upon the State Board of Health, whose duties shall be, coordinating dental activities, working in harmony with the physicians and taking advantage of the experience and machinery of the Board.

With such an arrangement both professions would have an official outlet and at the same time be in such close touch with each other that we could hope to attain the greatest possible good from the effort expended.

I would be remiss were I not to mention the splendid work done by your Miss B. C. Keller, Director of Lay Education of the Illinois Medical Association, and the cheerful cooperation rendered to the hygiene committee of our society.

We feel that all the foundational work has been constructive and the time, energy and money have been well expended.

The State Dental Society has at present over 300 Volunteer "Minute Men" strategically located throughout the State, who are prepared to go upon short notice to give oral hygiene talks before organized groups of people. We also have staffs organized and in process of organization to man fairs to assist the physicians in making health surveys.

I am informed that the medical society is well organized also.

We are strongly convinced from clinical experience, that any plans for better health conditions, that may be adopted, must stress particularly the examination and instruction of grade school children.

Volumes have been written giving statistical data upon the physical and oral conditions of our people, particularly our school children. Many such writings appear to have the earmarks of empiricism and do not ring true. In the hope that it might prove both interesting and helpful I shall presume to give you a short resume of work done in the Public Schools of Peoria.

For fourteen years we have had a full time

school dentist, who with a trained lady assistant has operated two school dispensaries.

All children are examined and charted, but only the children of parents, who are financially unable to pay, are cared for in the clinics.

When the work was started, we found from a careful survey that 95% of the children had tooth defects more or less serious.

That 65% of all first molars were defective and decaying.

That the average per mouth was three "Gum Boils" abscessed teeth.

No work was done unless a signed card requesting service was returned by the parent or guardian.

For the first eight years we worked for the children of all grades. About that time we found little to do in the advanced grades, so started eliminating them as conditions became more favorable and are happy to say that for the past four years we have found it necessary to care only for the children of the kindergarten and first and second grades, keeping the third grade under observation. Rarely do we have anyone from the higher grades and when we do, we find it is generally a child from some other city.

We attribute this success to the fact that lectures are given in all the schools, stressing the importance of good teeth and their bearing upon health and progress in studies.

Contests are carried on every month in all our schools the children working for 100% rating, brushing and teeth in good condition. In that manner interest is kept awakened and results attained.

Scholarship has improved, absentees for toothache are almost entirely unknown, and what appeals to the most of the taxpayers, great savings are made by the marked reductions in repeaters.

Interpolation of Case History.

GLEN OAK SCHOOL, PEORIA, ILLINOIS,
TEACHER, P. EASTERBROOK

Record of Charles C—

Before teeth were corrected.				
Conduct	Effort	Writing	Spelling	Reading
C	C	D	C	C
C	C	D	B	C
B	B	C	C	C
After teeth were corrected				
A	B	C	B	B
A	A	B	B	B
B	B	C	B+	B+

Explanation of Grades

A—Excellent 93-100

C—Average 77-84

B—Good 85-92

D—Poor 70-76

These grades do not describe the difference in Charles after his teeth were taken care of. He changed from a careless, incorrigible, boy of dirty unattractive appearance to a capable, well behaved boy of delightful appearance and with whom it was a joy to work.—His teacher, P. Easterbrook.

All the foregoing is but incidental to the ultimate, manifest in a healthy virile manhood and womanhood.

The late President Roosevelt once said that "the children of a nation are its greatest asset."

Then if we conserve our nation's greatest asset we can rightfully hope to cash in on a happy and prosperous manhood and womanhood. When we adopted our respective professions we tentatively accepted a responsibility greater than that of any other calling. If we are to continue to merit the respect and confidence of the people it is incumbent upon us that we assume the leadership in all legitimate movements that tend to improved Sanitation and Health in the Community, the State and the Nation.

Permit me in closing to reiterate the pledge, that in every movement inaugurated or fostered by the medical profession, that tends towards better health conditions, they may rely upon the unqualified support of the dentists.

DISCUSSION

Dr. J. R. Vonachen, Peoria: What the Dental Profession has accomplished in Peoria County I feel the Medical Profession can also accomplish throughout the state. For that reason we are now inaugurating a health center in Peoria, following the dictates of the Illinois state Lay Foundation Committee. We are starting such a health center this week. In order to accomplish our purpose in medicine as the dentists have accomplished theirs we must educate the people to periodic health examinations. We intend to have the mothers report at regular intervals with their children for examinations only, leaving out the treatment entirely. For this they are referred back to their physician. We feel that while the dentists can take care of decayed teeth and prepare hygienic oral cavities for us, it is up to the physician to co-operate by prescribing a proper diet rich in minerals and vitamins with the proper amount of balanced coarse foods so as to insure proper mastication, also to look after the general health of the child.

I believe that Dr. Whalen agrees with me when I say that the medical profession in the past have co-operated with the dental profession in Peoria County. I am only sorry there are not more medical men present to hear Dr. Whalen's paper as I feel it will bind the ties which unite our respective professions.

THE FALLACIOUS ORIFICE—THE VALUE OF THE CAUTERY PUNCH OPERATION.*

JOHN R. CAULK, M. D.

ST. LOUIS, MO.

History of Prostatic Surgery.—Surgery of the prostate has passed through the most gratifying phases of development in the last two decades, whereby the results have been markedly improved and the mortality rate has been diminished from an astounding one of 50 per cent. to a comforting one of 5 per cent., or thereabouts. You are perfectly familiar with the two great factors which have contributed to this development, namely: the evolution of modern surgical technique with proper anesthesia and, above all, the keen appreciation of the results of an obstructing gland on the upper urinary tract. You need no description of the various surgical techniques as you are thoroughly acquainted with them. It will suffice to say when proper methods are applied to its enucleation, whether by the suprapubic single or two stage operation, or by the perineal method, the present day mortality and the clinical results are about as satisfactory as can be hoped for. The realization that a high residual urine, regardless of symptomatic conditions, is a menace to renal capacity has had the most potent influence in the progress of the surgery of this organ. Years ago we heard surgeons say that they had to operate urgently to relieve an obstruction because there was a bladder full of urine, and such surgery was attended with a most malignant mortality, almost invariably as high as 50 per cent.; the ones who endured marked "the survival of the fittest." The great care in gradual decompression of such distended bladders and upper urinary tracts, the careful study of blood nitrogen, renal functional tests during the decompression and the accurate determination of the individual's general condition have been the factors which have combined to make this operation a relatively safe one in spite of the aged man. All of this has been realized by men familiar with this type of surgery for a number of years and the mortality rate which was wonderfully reduced in the beginning has remained about the same during the last ten years and it would seem that with our present

*Read before Chicago Medical Society.

knowledge of such conditions we can hope for but little improvement in these results.

Occasionally a surgeon may have a series of one hundred cases without a death, but, if one takes a cross section of the general mortality rate of prostatic surgery in the hands of the most competent men I am sure it will be found to register in the neighborhood of 5 per cent. While this is very comforting, a mortality rate of 5 per cent. is one entirely too high except in emergency surgery.

In what way then is there an open avenue for improvement in the mortality rate? Being so vitally interested in the study of prostatism since the development of the cautery punch operation which I described in 1920, I have gradually become convinced that there are many cases which have heretofore been operated upon by major surgery which could have been dealt with by less radical measures. The usual classification of the different types of prostatic orifice obstruction have been the bars and contractures, gross hypertrophies and carcinoma. The bars, according to all previous analyses, both clinical and pathological, constituted about 15 per cent. of all the vesical neck obstructions. The anatomical studies of Randall and Lowsley showed this figure. My first analysis of 485 cases showed 20 per cent. of such obstructions. Guthrie in 1830 was the first to call attention to this type of orifice and later Mercier suggested a method of treatment for its correction, but nothing substantial was accomplished until Young in 1909 renewed interest in this feature of prostatism and presented his median bar incisor for the surgical treatment of this condition. In his hands the method proved very effective in curing a large percentage of such obstructions and numerous other surgeons were equally impressed with the value of this operation. It has been shown that sufficient tissue could be removed to accomplish a satisfactory functional result and the results were durable and permanent. This operation on account of occasional severe hemorrhage and reaction from absorption did not prove a popular one with other surgeons. Believing firmly that such an operation for the bars and contractures was the proper one, I undertook in 1919 to construct an instrument similar to the Punch designed by Young, but one which would have a tendency to lessen such hazards as hemorrhage and absorption. It was for this reason I de-

signed the cautery attachment and instituted infiltration anesthesia to the vesical neck. Other types of endo-vesical technique have been developed for correction of lesser degree obstructions, namely, high frequency cauterization, incision of the orifice through the endoscope with small cautery blades, etc. These procedures were quite ineffective in curing obstructions for the simple reason that they failed to remove or destroy sufficient tissue to be productive of a substantial result and furthermore cauterization was out of proportion to tissue excision. The Chetwood galvano cautery operation is quite successful in relieving many such obstructions but this really amounts to a major operation through a perineal incision and can accomplish no more if as much as by the removal through the urethra. All of these methods were designed for the 15 per cent. of lesser obstruction since it was thought that the remaining group was of such a character as to be curable only by open surgery.

In studying the internal vesical orifice in many of these cases with obstruction I was impressed with the remarkable transformation of picture from time to time under certain conditions, and soon realized that the true basic condition was often obscured by reactionary processes. It is for this reason that I have designated it as "The Fallacious Orifice," the word fallacious being used not in its ordinary meaning as something false or untrue, but to express the idea of something deceptive and calculated to mislead the mind or eye.

There is no subject to which this can be more appropriately applied than to prostatism resulting from contracture. Our usual conception of a contracted neck is that it is an orifice constricted by a scar with very slight intravesical growth or rectal enlargement of the prostate. It has always been classified as a clean cut entity and supposed to show little change in its character from time to time. My personal observation has convinced me conclusively that its character is not constant but on the contrary rather changeable, and my chief reason in presenting this discussion to you tonight is to call your attention to the remarkable transformations in such an orifice under drainage and relaxation and to bring to your notice the fact that many such orifices convey the most erroneous impressions as to the extent of their fundamental involvement. To illustrate this let me trace the development

of the punch operation as it has been applied to such obstructions: In 1920 it was utilized in less than 20 per cent. and only on the definite bars and tight contractures; in 1923, 30 per cent. At this time attention was called to the changes of the orifice under drainage, in 1924, 40 per cent. In analyzing 1,200 cases of prostatic obstruction I find exactly 40 per cent. can be relieved by this method; that is the type of orifice was entirely compatible with such surgery. In applying this operation to a series of 50 prostates of the large so-called adenomatous type of obstruction I have had a chance to observe the changes not only at the internal orifice but of the gland as a whole after catheter drainage and partial removal of the obstruction and have seen a number of those organs which seemed large, firm and adenomatous diminish to normal size with complete resumption of urinary function following the removal of but a slight proportion of the entire growth. All of these gave typical evidence cystoscopically and rectally of gross hypertrophies, and ones which would ordinarily be removed by major surgery.

In these border-line cases it is sometimes difficult to predict the exact outcome. I remember that before the American Urological Association last Spring I operated upon two patients both of whom were on catheter life each for a period of over five years and had identically the same rectal prostate and cystoscopic findings of a large colar orifice. One patient was completely relieved and urinated immediately following the punch with the removal of one piece from the median portion of prostate, the other man required three operations and at the present time is not completely relieved. My policy in these patients is to give them the benefit of the doubt. I feel with all sincerity that the punch can be tried and if they are relieved a great deal has been spared them, and if they are not, they are subjected to very little economic loss and practically no physical hazard or danger to life.

In cystoscopy patients for other conditions one often finds very pronounced intra-vesical prostatic enlargement without the slightest symptom; whereas this same identical picture may be responsible for complete retention of urine; in other words, there is so little difference in the findings between complete function and disfunction that it is oftentimes hard to interpret.

It is said that 30 per cent. of all men beyond middle life have enlargement of the prostate but only half of these have symptoms. It, therefore, seems rather unjust to a prostate which begins to offend to be subjected to immediate and complete destruction by surgical removal when in all probability only a small portion in the immediate location of the sphincter is responsible for the trouble in many instances.

Let me call your attention also to the not uncommon change of configuration in a prostatic carcinoma under drainage. I know of a number of instances in which the rectal examination gave not the slightest impression of carcinoma until after a course of drainage for the relief of retention with its consequent spasm and coincident reactionary process, show on the second examination a completely altered organ and instead of a rounded, smooth, large affair there was a small irregular hard prostate typically malignant. I cannot urge too strongly the diagnostic value of catheter drainage as a means of arriving at a substantial diagnosis.

This striking change is observed between the two stages of prostatectomy. We have had a number of cases in which our primary diagnosis was benign obstruction show on rectal examination before the second stage definite evidence of malignancy. In this instance the inflammatory reaction which we have previously described has subsided and the true condition is noted. It is our routine to make a rectal examination before the second stage is undertaken and in the instances where the transformation has been more than expected or the organ has been previously misinterpreted a punch operation will be all that is required. We have several suprapubic fistulae from other clinics either because they were unsuitable for the second stage or because they wanted to see if the punch operation would not cure them. Two patients I wish to particularly site since they were both done by competent men and they were both described as having rather large prostates several months before admission to our clinic. On examination it was found they were both small contracted necks and they were both promptly cured by the punch.

Some of these prostates were materially diminished in size but were not sufficiently removed to effect a functional result and had to be later removed by surgery.

Let me not be understood as advocating such

a method in large obstructions in a fit and suitable surgical subject, but many obstructions which at first appearance seem large will diminish under drainage so pronouncedly as to relegate them to minor surgery.

I have learned from observation of these prostates that the majority are inflammatory and many have as their fundamental condition a contracture which by its constant insult at the vesical orifice with interference with sphincteric mechanics is creative of marked proliferative inflammatory changes both within the ascini themselves in the form of epithelial over-growths and around them a peri-ascinar infiltration. Such a theory was advocated many years ago by Ciechanowski and believed in very strongly by Ewing, Green, Brooks, Motz, and many others while the majority of pathologists and surgeons have classified this growth as an adenoma. The theories concerning the nature of this growth have always been speculative since it is in many instances difficult to distinguish by histological examination between an adenoma and a general hyperplasia. A circumscribed glandular tumor is considered an adenoma but such tumors may result from inflammatory conditions. An adenoma usually departs from the character of the gland in which it is located, for instance, an adenoma of the breast will give no microscopic evidence of mammary gland whereas the the so-called adenoma of the prostate appears invariably as modified prostatic tissue. Heretofore there has been no chance to prove one or the other theory except by microscopic evidence since the gland has either been left undisturbed or completely removed and in this way the chief index of discrimination has been denied and I am more and more impressed as I have followed these glands after partial removal by means of the punch of their inflammatory nature since I have seen any number of cases diminish materially after a partial removal with drainage and release of tension and spasm. This could only be expected from an inflammatory condition and not from tumor and it is entirely in line with lesions in other organs which are familiar to us. For instance, the enormous proliferation seen around a cervix in infection often simulate tumor growth. The same thing is seen in stricture of the urethra. I recently saw an enormous growth which simulated a tumor around the right uret-

eral orifice in a patient who had an impacted intra-mural stone with pyelonephritis. After incising the orifice and removing the stone and clearing the infection, this mass, the size of a cherry, subsided spontaneously. You have all seen this occur between the two stages of a prostatectomy. This transformation is not merely the relief of congestion but the absorption of inflammatory infiltrate. The relief of retention and spasm with its coincident inflammatory reaction has enabled me to apply the punch operation with effect to many of these deceptive orifices. It is through this method of removal that the general mortality rate of prostatic surgery can be reduced since the mortality from such an operation is negligible. In my series of 265 cases there has been no death.

How then is one to know which type of prostate is applicable to such surgery? In order to clarify this in your minds I will try to correlate the various findings which would serve as an index of selection of surgery insisting on placing cases for observation giving proper time to catheter drainage, repeated cystoscopic and rectal examination. For a clinical classification I have considered these as contractures and subdivided these into bars and collars. The bar contractures are familiar to most cystoscopists, being elevations or thickenings in the median portion of the prostate at the sphincter margin. In some of these early contractures one really sees by cystoscopic examination very little obstructive indications. I believe pallor of the orifice with a certain lack of pliability and evidences in the bladder wall of early trabeculation are the most significant. Here we must not expect to find projecting lobes or gross evidences of obstruction. The passage of endoscope or even the passage of a cystoscope into such a bladder neck will serve as a first clue; it will be noticed the eye-piece has to be considerably depressed in order to enter the bladder. Again, with the cystoscope in the urethra and finger in the rectum a thickening may be felt between the two.

Furthermore, the immovable tightness of such an orifice to the passage of an instrument is noticeable. The collars are divided into four groups:

The first class shows slight vesical ingrowths completely encircling the neck, appearing cystoscopically as thickenings, and in no places allowing the orifice to be flush with the bladder wall.

The second class is more pronounced and has added to this circular arrangement enough bulging to be creative of shallow clefts, particularly above.

The third degree shows considerably more intravesical bulging, with deeper clefts, and forms the borderline cases between major and minor surgery, requiring a most careful examination.

The fourth degree comprises the dense sclerosis, or the so-called true vestical neck contractions. This type of orifice is usually associated with very magnified symptoms, marked frequency, urgency and tenesmus. This has been the type which has been difficult of correction and prone to recurrence.

The third group are the ones which are particularly deceptive and are known as the borderline cases and require careful study in order to place them for proper surgery.

Let me briefly summarize the symptoms and findings of this group of patients on which this punch operation has been applied. The symptoms, such as frequency, difficulty, urgency, pain, etc., are identical to those associated with larger obstructions. No one could discriminate from the symptoms alone with which type of orifice he was dealing. Nine per cent. of the patients had complete retention of urine and were on catheter life, 10 per cent. had paradoxical incontinence, over 20 per cent. were definitely uremic and were carrying large residual urines, high nitrogen, low phthalein; the majority of these were extremely bad surgical risks and resisted protracted drainage and the usual therapeutic measures to correct uremia, and would under any condition have given an extremely high mortality through prostatectomy. There were 10 suprapubic fistulae and 1 perineal fistula.

Age of Patients.—About 15 per cent. have been under 50 years of age, 5 patients under 40, 12 patients over 80, 60 per cent. between 60 and 75, the common prostatic age. Like the symptoms, age offers but little suggestion as to the possibility of the type of prostate except in the younger group. In the men under 50 years of age, the majority were suffering from frequency of urination, usually getting up 2 to 3 times at night, having no residual to 5 or 6 ounces, most of them had been treated for a number of years with only temporary relief and were individuals on whom a prostatectomy would be hesitantly

advised. Such a group is particularly suitable for this type of therapy. There are innumerable instances of the young man suffering with lesser obstructions who cannot be cured by local treatment, who can be restored to perfect urinary function by this method. In the group of real old men beyond 80 this operation is particularly appropriate. I do not mean to say that a man beyond 80 cannot be subjected to prostatectomy, I have operated on them over 90 years of age, as many of you have, but I contend that age adds an important factor in the production of mortality rate and these old men, regardless of how skillfully they are operated upon or how carefully they are prepared, give a mortality too great to be ignored and should not be prostatectomized if there is a more simple way to effect a cure.

The rectal examination in this group of patients reveals that the prostate has been about normal in size in about 65 per cent. and enlarged in 35 per cent. The rectal prostate is at times also deceptive. The broad slightly bulging prostate frequently conveys the impression that it must be dealt with by surgical removal, but, under drainage and incision of the orifice, you will be surprised at the remarkable transformation and shrinkage of many of these glands. Usually a small rectal prostate will indicate a small intra-vesical one, whereas a large rectal prostate by no means tallies. It is much more common to have an incompatibility between large rectal and intravesical than the small rectal and intravesical involvements. Residual urine was present in most of the cases and varied from 2 oz. to 1500 ccs. There is a decided misunderstanding about residual urine as an index of obstruction and equally so to its relief. Many of the most irritable bladders, with their normal mechanical emptying interfered with, are able through compensation to completely empty themselves through this irritability with its frequency and do not develop residual urine and these patients must be relieved. In other words, we have the patient's comfort to consider as well as his life. There are proportionally as many high residual urines from the lesser types of obstruction as there are from the gross, so that residual urine also offers no hint as to the type of surgery indicated. When it is summed up, the rectal and cystoscopic examination must differentiate and

classify these prostates and not only one examination but repeated. I know that some clinics do not routinely cystoscope their obstructive cases. If there is ever a real need for cystoscopic study it is in these very cases since it is only through it that we can properly understand the type and select our cases and cut down the general mortality rate of prostatic surgery.

Furthermore, there are frequently associated lesions which must be determined beforehand, the most frequent of which are the neurogenic bladder vesical calculus, diverticulum and tumor. The bladder of central nerve disease may symptomatically appear identical to the mechanical obstructions and the cystoscope will finally reveal the true condition. There is quite frequently associated with a neurogenic bladder, a bar. We have had a number of such cases which would not respond to the ordinary therapeutic regime which usually corrects such bladders until the mechanical phase of the obstruction was removed. The neurogenic bladder is really quite responsive to systematic careful attention to emptying and training, and will usually lend itself to such methods very satisfactorily. In the presence of a bar or other mechanical obstruction at the neck the response is not forthcoming and attention to the mechanics is paramount. I have had a number of cases which illustrate this very vividly. Two patients seen in the last two years with definite symptoms of tabes carrying high residuals, paradoxical incontinence, and marked evidence of renal insufficiency and toxemia failed to respond to the usual palliative therapy and showed no improvement in bladder function whatever. They both had decided bars, in fact one had a definite median lobule. Both were completely relieved after the removal of these obstructions with the punch, both requiring two operations.

Stone in the bladder is frequently associated with lesser obstructions and the presence of the vesical calculus often produces a reactionary edema and infiltration around the bladder neck sufficient to convey the impression of a gross obstruction, but, after the stone is crushed and evacuated by litholopaxy and the bladder put at rest by catheter drainage and cleared of its inflammation which is so frequently present there usually occurs a marked retrogression of the orifice and at least 50 per cent. of our stone cases with obstruction have been relieved by combination

litholopaxy and punch operation. In neither instance is there an anesthetic required and in neither instance is there much economic loss or danger.

It is frequently argued that the punch operation can be of no service in the very tight contractures at the neck and yet when you see a surgeon do a suprapubic operation for the removal of such an obstruction you will find him whittling out a small V-shaped segment from the lower sphincter margin usually not as large as can be removed by the trans-urethral method and certainly the convalescence of suprapubic for a tight neck is not as comforting as in the larger obstructions.

In the case of diverticulum associated with such obstructions, if the diverticulum needs attention, the open operation is essential, but, if it is small, and the opening large, the punch operation is all that is necessary. In the case of bladder tumors associated with lesser obstructions at the orifice the method of surgery is dependent upon the operator's choice and upon the fad of the times.

After Care.—Constant attention to these patients is exceedingly important, and while they do not have any great discomfort or general reaction, I believe it is entirely because I have men handle them who are so keenly interested in the problem. After the operation my associate, Dr. Sanford, keeps a very careful supervision over these patients and protects them against the difficulties which might occur and which I shall enumerate. We have never seen a single instance of shock following the operation. We used to put an indwelling catheter in about 66 per cent. of patients who were operated upon and they were the spastic bladders and those with rather high residual urines or cases with marked infection. Those with earlier obstructions and with simple punch operations, in which one bite was taken from the median portion, were allowed to go without a catheter. A few, however, began having vesical irritability, marked frequency, and required catheterization; this usually came in the afternoon when we were not at the hospital and catheterization was done by an interne who, not being particularly skillful with the instrument, frequently caused trauma and edema and a certain amount of bleeding. For this reason we have made it a practice to put in an indwelling catheter in all cases, leaving it open and allowing

it to drain constantly for 24 hours. In this way the patients are much more comfortable. If there is any blood at all, it quite promptly subsides. We do not irrigate these bladders as routine or do anything to stir up the orifice. It is very important to have a catheter with 2 eyelets, a silk woven catheter is used in preference to a soft rubber; it is removed in about 48 hours in all cases except those with high residuals and the patient allowed to void. If he voids freely, all well and good. Should he show evidence of frequency or difficulty, a catheter is immediately reinserted until the edema has subsided. Some of these individuals we have to test out repeatedly before we can leave the catheter out and indeed some of these give us our best results. Sedatives are seldom required, indeed it is rare to give a hypodermic. These patients are all put on urotropin and acid sodium phosphate. One has to be quite careful in the administration of urotropin since it very frequently creates bladder irritability and frequency and often the cessation of the drug will relieve this condition.

Technique.—The technique of the operation is very simple and requires less time than ordinary cystoscopic examination. The instrument is passed into the bladder, the obturator is withdrawn, the urine is evacuated, and with the left hand grasping the outer rim of the instrument, it is pulled outward and pressed downward so as to engage the obstruction at the internal orifice in the slot. Under the reflected light, this obstruction can be observed and its type, that is, whether glandular or sclerotic, definitely determined. In case of lobules at any part of the orifice which need removal, they can be readily seen in the slot of the instrument, as it is rotated round the circumference of the sphincter. With the tissue in the slot of the instrument, firm pressure against the orifice must constantly be made and at no time should the grip be relaxed. This is the important step of the whole operation, in order to squeeze in the slot as much tissue as possible and to hold it there. In order to secure this firm grip of the orifice it is often necessary to elevate or lower the table, as the case may be, so that the operator may be perfectly comfortable in the sitting position. All water is removed from the instrument and the orifice with a suction bulb. Following this, it is swabbed with cotton pledgets until it is perfectly dry. The

infiltration needle is inserted along the base of the instrument in order to infiltrate beneath the tissue within the slot. In this way, anesthesia is effective far beyond the confines of the instrument. Again, the field is made perfectly dry before burning is started. An assistant, who manipulates the cautery, passes the blade, which is then inserted in the outer sheath and introduced as far as the obstruction in the slot. At this time the signal is given, the cautery is turned to its proper heat immediately, and the operator, by rotary motion with forward and firm pressure, burns through the orifice. The average time for this burning has been four seconds. Immediately, the assistant turns off the current. It is very important to have this release of current done rapidly. By this technique we have never had the sensation of burning along the urethra, and have never felt the terminal of the instrument hot. For the average bar or simple contracture, the one incision is all that is necessary, and the instrument is removed with the tissue within the slot. When there has been a history of previous bleeding, the evidences of increased vascularity, we sometimes, at low heat, resect the site of operation.

If more than one piece is to be removed, the instrument is put farther into the bladder, and the current is turned on moderately to coagulate the tissue within its grasp in order that it may adhere to the blade. When this is done, the blade is removed and the tissue extracted. If so, one can insert duck bill forceps down the sheath of the instrument and remove the tissue. Very rarely, it may fall into the bladder; if so, it should cause no concern. We have had this happen but once. The outer sheath is then manipulated so as to grasp the obstruction in some other part of the orifice, and the same technique is employed, with the exception that, if the lobule is lateral or above, the patient's buttocks are elevated, and the external part of the instrument is carried well to the opposite side, or below, depending on whether it is lateral or superior. When removing the instrument, it is important to have the blade in place or reinsert the obturator. One should never remove the instrument without obturation.

The important features of the technique described above are: *First*, the firm grasp of the orifice within the slot and securing it there until the completion of the operation. *Second*, a dry

field while the burning is being conducted so as to burn and not boil. *Third*, firm pressure with rotation of the cautery blade during the burning so as to cut through promptly within four seconds.

The proper current for the instrument is the alternating 110 volt. The transformed direct current is seldom effective. For some reason or other, the current seldom goes promptly or sufficiently to the terminal. One must be thoroughly acquainted with the amount of heat the blade is getting before attempting to use the instrument. This can be obtained by burning beef gristle.

The instrument requires care in keeping it in condition. It must be thoroughly dried and cleaned after each operation. The inner blade bearing part of the instrument must never be sterilized by boiling or by soaking, except to put the blade in a cotton pledget soaked with alcohol. As a matter of fact the inner part needs no sterilization, since the heat is all that is necessary. It is always important to be sure there is no corrosion. With care, the instrument is very durable. The original instrument is still in use, and has had no gross repairs since January, 1920.

We have done all of these operations under infiltration anesthesia, with one or two exceptions in cancer. There is really no necessity for general anesthesia except in very rare instances. Sacral anesthesia, while it is very effective for the average manipulation around the vesical orifice, is quite contra-indicated in this operation, since it causes too much relaxation of the neck, and really has a tendency to defeat rather than to help.

Most of these operations have been done in the office and the patient allowed to go to the hospital in a taxi-cab. This has been done because we were familiar with the current at the office and the hospitals had direct current which was unsuitable. However, there is no question about the fact that it should be a hospital procedure, and recently we have been doing most of the cases at the hospital since the proper current has been installed. This operation has been repeated on 10 per cent of the patients for the purpose of removing all of the obstruction. Multiple pieces have been removed from the orifice either at one sitting or at several in 29 per cent. In the larger obstructions several operations are required. On one patient we have done fourteen operations,

this was a patient 81 years of age who had a very large prostate with a two quart residual, paradoxical incontinence and profound uremia. He has been considerably comforted and a description of his condition will be given later.

Hemorrhage—In 265 cases there have been three patients who had active bleeding; one was a diabetic, one bled after several hours following sexual excitement, and the other patient had a perfectly legitimate excuse for bleeding in that it was one of the earlier cases done with direct current, the instrument did not go home and the mucous membrane was torn in order to remove the instrument. Aside from these hemorrhages which promptly subsided upon evacuation and attention for 24 hours there was not the slightest concern about bleeding in *another single instance*. Many did not bleed at all after the operation but the majority passed urine tinged with blood. We have never had to open a bladder for hemorrhage nor have any of these patients shown any change in blood pressure or needed transfusion. Secondary bleeding occurred quite frequently in a very light form in the earlier cases and came anywhere from a few days to two weeks; this bleeding seldom amounted to anything but slight staining of the second glass. In six cases there was quite active bleeding which required an indwelling catheter and rest in bed. Almost all of these were earlier cases and were due entirely to the fact they were up and about too early. For this reason we have made it routine to keep these patients quiet for at least a week and since then there has been but one bleeding of any consequence.

Chills and fever occurred in 13 instances, all in the infected cases. But there have been any number of cases with severe infection who have had no febrile reaction whatever. Epididymitis has occurred eight times, there has been but one case in the last year and a half.

Sloughs—I have never seen a slough following the punch. They all pass shreddy urine, which is natural; neither have I seen incrustation. These surely must come from excessive burning and I do not believe should occur if the operation is properly performed. I have cystoscoped a few of these bladders two weeks after the operation to observe the orifice and have been gratified that it has been difficult in many instances to find the slightest irregularity. Furthermore, a specimen was obtained at autopsy from a

patient who died of pneumonia, which he contracted in another city three weeks after operation. This bladder showed the most perfect healing and no sign of scar. Dr. Laurie of Syracuse told me of a case of his on whom he had done a punch with perfect result and without disturbance, the patient died suddenly of an old cardiac lesion after he had left the hospital. This bladder which he obtained at autopsy was perfectly smooth, showed no indication of scarring at the neck.

We have seen but five suggestions of pyelonephritis following this operation. This, with the absence of chills and fever would in itself indicate the infrequency of vesical neck sloughing or extensive destruction. Above all, we have analyzed specimens removed at operation from practically all of these patients and it is quite striking that there is a conservation of even the epithelium in many instances, as you can see from the lantern slides. In this connection I might say that several men who are using the instrument have written me about such complications following the operation, and in most instances I found they had turned the heat on before engaging the orifice, or they have not evacuated the field dry and really boiled the tissue slowly. In one instance the operator removed the instrument having the heat on, and stricture followed. Another operator removed the instrument without the obturator and tore the urethra. Such things, of course, are due to faulty technique and should not occur. If properly executed I am confident that sloughing and later stricture formation should never occur.

We have seen no evidence of incontinence and we should not expect it since a section may be removed from one portion of any sphincter without muscular interference and we know how we interfere with the internal sphincter doing either the suprapubic or prineal operation, particularly the suprapubic, hence we should not look forward to such a complication in this simple incision. The true cause of incontinence should be injury to the external sphincter and in this operation one is so far remote from this sphincter in the surgical manipulation that it would not possibly cause sphincteric disorder.

There has never been any sexual disturbance. The rest of the post-operative course depends upon the character of the obstruction and upon the individual equation. As a rule there is no

instrumentation under six weeks except in patients who begin to have frequency and then a catheter is passed for the relief of retention and one catheterization frequently subsides the storm. After the first four or five days we inject an antiseptic solution, either collene, mercurochrome or argyrol through a urethral syringe under light pressure into the bladder. This is about all that is done.

Time required for results varies in different individuals from immediately after the operation to six or eight weeks. This is not always influenced by the type of obstruction. While the simple bars and early contractures are the ones which respond more promptly to this operation, many of them through reaction and edema require considerable attention before the end result is complete. Indeed some of our patients on whom we expect an early result but who require frequent catheterization and attention to the orifice as late as eight weeks after have given us the best functional results. One cannot simply punch these patients and leave them. Great care must be exercised in not allowing the secondary edema to cause spasm and retention since this defeats the purpose. So one should not be discouraged if a patient should go at least four weeks with a poor stream and evidence of obstruction since many of these patients will become completely relieved. In the case of larger growths where repeat operations are necessary the interval between operations is variable but we wait at least four weeks or longer; we are, of course, guided by the post-operative behavior of the patient.

RESULTS

I imagine you will be particularly interested in hearing the late results following his operation. There seems to be a current impression that such surgery is only attended by evanescent benefits and only major surgery can effect a permanent cure. This, I feel satisfied, is entirely erroneous and I am convinced from the careful analyses of our cases who have answered questionnaires or who have been seen personally that such surgery is attended with the most gratifying results equally as good as and as permanent as through major surgery. In order to understand the character of our results we have included patients operated on from 1920 to 1924, giving us results ranging from one to five years. We have been able to follow 132 cases, of these 116

were non-malignant. I have tabulated them according to years to watch the permanency of the results.

In 1920—26 cases have been followed, 80 per cent of which were bars and 20 per cent gross obstructions. 85 per cent showed permanently good results and 15 per cent poor results. The poor results occurred entirely in operations upon the bars and smaller obstructions.

In 1921—27 cases have been followed, 87 per cent of which were bars and 13 per cent gross obstructions. 82 per cent showed permanently good results and 18 per cent poor results. Three of the poor results occurred following operations upon small median bars, one median bar associated with tabetic bladder and one in a larger border-line obstruction with lateral involvement.

In 1922—18 cases have been followed, 72 per cent of which were bars and 28 per cent gross obstructions, 92 per cent showed permanently good results and 8 per cent poor results. The poor result was a typical contracture.

In 1923—18 cases have been followed, 77 per cent of which were bars and 23 per cent gross obstructions. 87 per cent showed permanently good results and 13 per cent poor results. Of the two poor results one was a tabetic bladder with median, the other a small median.

In 1924—37 cases have been followed, 60 per cent of which were bars and 40 per cent gross obstructions. 84 per cent showed permanently good results and 16 per cent poor results. Of these poor results three were in large obstructions, two of the patients were told they would need a repeat operation. I feel confident that a repeat operation would have cured them.

The permanent results, therefore, since 1920 showed a general average of 86 per cent good and 14 per cent poor results.

The striking and unexpected thing is that of the poor results 13, or 76 per cent occurred in the smaller type obstruction and only 24 per cent in the larger type. This tallies quite well with the results with prostatectomies, the worst results occurring in the dense hard true sclerotic contracture.

Some of these have shown evidence of recontracture and required dilatations, such dilatation giving great relief, whereas previously they had been without effect. The patients who have shown evidence of recontracture have always demonstrated it within a few months, those who

have gone longer have been permanently cured. Some of these recontractures, only a few per cent, required secondary operations, but in each instance this was predicted at the time on account of the size of the obstruction. The 14 per cent which were not cured are hard to explain. In many instances no satisfactory explanation can be given, they seemed typical cases and should have responded. A few may have had intra-urethral lobules and it is possible that a central nerve lesion might have been present in some, although it was not demonstrable. However, this same circumstance applies to prostatectomy.

Carcinoma—We have employed this operation in 20 cases of carcinoma of the prostate along with radium and deep x-ray therapy and the results with its use have been most pleasing. Since carcinomatous obstruction is seldom large but more of the contractile variety, incision through the neck will usually give the most comforting results. The duration of life following the operation has ranged from six months to four years; two patients have lived four years, one patient lived three years, and three patients lived two years, the average life being two years. 77 per cent obtained complete relief of obstruction until death. Four required suprapubic drainage later; of these, three were for extensive involvement of the bladder wall and one to relieve obstruction secondary to contraction following perineal implantation of radium in which punch and even a filiform was impossible of insertion.

The comfort and relief of urinary obstruction in such cases is certainly far preferable to suprapubic drainage; we personally feel that suprapubic drainage, unless there be extensive involvement of the bladder itself, is seldom indicated in carcinomatous obstruction for drainage. By means of this operation urinary function is restored to such an extent that the majority empty their bladder completely and we must remember that whereas these patients are doomed, death is hastened only by the suffering of urinary obstruction as far as local effects go, but also as is the case in other types of obstruction by the uremia and toxemia resulting from back pressure. Because of these constitutional symptoms physicians are prone to neglect these patients believing them to be the result of metastatic processes. We have seen a number of patients who were considered to be suffering from a malignant cachexia who were in reality uremic as a

result of obstruction and we all know how long a person may live with generalized visceral and bone metastases and be without toxic symptoms.

SUMMARY

This operation owing to its simplicity of technique, the absence of general anesthesia, freedom from hemorrhage, infection and serious complications, slight requirement for hospitalization and economic loss, and the excellent results in the large number of cases and negligible mortality makes it the operation of choice in at least 40 per cent of all cases of prostatic obstruction. Repeated cystoscopic and rectal examinations are essential for the proper selection of suitable cases, and through these many more than the simple bars may be effectively handled by this method, since the apparent gross obstructions are very frequently transformed to lesser ones. This is the most important feature of this whole problem. By the increased application of punch operation to this type of obstruction we may hope for a lessening of the general mortality rate of prostatic surgery.

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PRESERVATION AND RESTORATION OF FUNCTION FOLLOWING INJURIES TO EXTREMITIES*

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Observation of the rather shiftless, haphazard and lack of properly planned procedures for restoring injured extremities to their normal strength and function have frequently been made. Many physicians and surgeons in the past have failed to realize the importance of restoring function and normal strength following injuries. I believe that in many cases there is a wide difference of opinion as to the degree of permanent disability simply because of different viewpoints. A patient may contend that an arm or leg is permanently disabled because it is not as strong as his normal one, or because he is unable to do the same things with the injured extremity as he can with the other.

The attending surgeon has perhaps noted that an excellent result in a case of fracture has been obtained, if the fractured bone is alone considered. The fragments may be in good alignment,

there may be no excess callus, a good bony union present and still have extensive disability. I believe the end result following fractures is frequently misjudged by laying too much stress on x-ray appearances.

It is the purpose of this paper to urge a definite plan of procedure, the object of which is to restore injured extremities to as nearly normal function as possible; further, to urge early use of restorative measures rather than the usual late usage for reducing permanent disability.

There are many methods and factors in the early care of injuries that are important in later restoring these injured parts to their normal function without pain. It is with this idea in mind that every precaution should be taken to prevent undue swelling following injury. Sprained ankles should be sent to the surgeon avoiding unnecessary walking. Crutches should be provided, or patient sent home in a taxicab, even though he might be able to get home without them.

The prevention of unnecessary hematoma formation and hemorrhagic extravasation is important in shortening the disability period. The intelligent, cautious transportation of injured patients is more important than the matter of a few minutes delay in getting them to the hospital or doctor's office. Improperly applied tourniquets, that is those not applied tight enough to completely stop arterial bleeding, but so tight that the venous circulation is obstructed, often result in an unnecessary hemorrhage or extravasation into the tissues. All of us recall some lacerated wrist brought to the office with a tourniquet applied in which the hand is congested with venous blood and the wound oozes rather freely. Simply loosening such a tourniquet frequently stops all bleeding as soon as the venous circulation is re-established.

The next important factor in facilitating early restoration is the principle of applying immobilizing apparatus so that the stronger muscles are stretched and the weaker muscles relaxed. There are, of course, times when this principle must be violated in order that fragments of fractures may be placed in proper alignment, but whenever possible, this principle greatly aids recovery. Along this line is the custom of placing all shoulder injuries so that the arm is abducted usually by means of an aeroplane splint. Gravity and the adductor muscles will soon pull an arm down but

*Read before the Chicago Society of Industrial Medicine and Surgery, and the Chicago and Northwestern Railway Surgical Association.

it takes great effort, much expense and longer time to restore an over-stretched deltoid muscle to its normal function. It is much easier to get extension of an elbow than to get flexion.

The ideal period of immobilization is the shortest time that will in no way jeopardize the result. The length of such immobilization periods are constantly changing. Take for instance, the length of time in bed following herniotomy. It is not many years ago that these patients were kept in bed for from four to six weeks, whereas, now we feel that twelve to fourteen days is plenty long enough, and recurrent herniae because of letting patients up after this time are exceedingly rare.

Fractures without displacement do not have to be immobilized until the entire process of bone repair has been completed. The object of immobilization in these cases is to relieve pain, relieve muscle spasm and to prevent displacement, if such is likely to occur. In fractures without displacement, early physiotherapeutic measures, such as bathing, massage, passive motion and even diathermy can be started within the first week. It is, of course, more difficult to estimate the ideal periods of immobilization in fractures with displacement requiring reduction. It is still very much of a problem in these cases as to just how long the immobilization should last. There are several among our profession who feel it is safe and proper to start massage, active and passive motion within a day or two even in the fractures where displacement has had to be corrected by reduction. Just how much risk these men take of again displacing the fragments or causing excessive callus formation or delayed union, I do not know, but their efforts will help us in determining the minimum of safe fixation periods. I believe no definite length of time should be fixed for all cases but that it should be determined for each case, depending upon:

1. Character of fracture.
2. Success of replacing fragments.
3. Danger of angulation or shortening.
4. Muscular development of the individual.
5. Habits and personality of the individual.
6. Place of treatment, whether hospital, home or ambulatory.

Regardless of the length of immobilization, there are certain measures that can be observed while fixation apparatus is in place. The most important, I feel, is to keep the various bursae

over bones in as near normal state as possible. From disuse there is an early tendency for such bursae to shrink, become devoid of fluid and actual fibrosis to occur. Where these bursae are exposed, they can be massaged, the circulation improved and much trouble avoided later in restoring function of the injured member. The several bursae about the knee, the subacromial or subdeltoid, olecranon and the bursae over the malleoli and greater trochanter lend themselves best to this treatment. In the aeroplane, Thomas and other open splints, these bursae are accessible. In plaster paris casts, windows can be cut over these bursae without interfering with immobilization.

Removable splints are a great advantage in starting early massage as well as passive and active motion. I use plaster paris extensively for immobilizing and it is a very simple procedure to split these casts, line the margins with adhesive, and thus I have a perfect fitting cast which definitely immobilizes when this is desired to be fixed and can be made into a removable cast any time that one wishes to do so.

Bathing and gentle alcohol rubs are considered advisable preceding actual massage. Gentle massage, gradually increasing, but at no time very painful, is next in order for injuries, be they fractures, contusions or sprains. Heat, either in radiant form or as diathermy, are excellent adjuvants preceding massage.

Passive motion is the next procedure in order. This should be started very gradually and increased daily at a sensible rate of tolerance.

There is a stage now between passive and active movements that I wish to mention more at length, simply because I have found it an excellent transitory stage between passive and active movements. It consists of placing the injured member in such a position that the distal portion is downward and the patient instructed to swing it gently at first and gradually increasing. In wrists, the flexed elbow is supported by the good hand so that the injured forearm is in a vertical position. Elbows are hung over the backs of chairs or over rods, at desirable heights.

With shoulders this procedure is a little more difficult. The patient lies on the injured side on the table with his head and shoulders beyond the end of the table. It is necessary to have someone support his head or the patient can hang onto a rope suspended from the ceiling. The suspended injured arm is now swung by the

patient in circles or through whatever arcs are possible. In this position, all the muscles about the arm and shoulder are relaxed and motion is therefore of a much greater range than when the arm is supported at the side of the patient.

For the knee and hip, the patient stands on a platform or stool, six to eight inches off the floor. His injured leg is then swung in circles, or forward and backward as far as possible. The advantage of this active motion while the injured extremity is suspended by gravity, is that practically all muscles are fully relaxed and atrophied muscles can produce greater range of motion than if they are called upon to work against gravity.

Extensive active movements are by far more desirable than passive movements and should be started at the earliest possible time. The active nerve impulses are extremely valuable for the tone of muscle and also because actively contracting muscles greatly increase the circulation of blood and lymph. This increased circulation is not obtained by passive movements.

Active exercises and mechanotherapy are next in order. In compensation cases, it is far from satisfactory to simply tell a patient to exercise to some extent. These exercises should be done in the presence of the surgeon or his assistant, first to see that they are done correctly and secondly to assure himself that adequate exercise is being done. It is a mighty tempting thing for a patient to exercise a muscle ten or fifteen times and feel satisfied as it gets slightly tired or the movements become painful, but the surgeon should insist on enough exercise being taken to rapidly develop the normal strength in the weakened muscles. He must at various times encourage, urge and many times insist, in order to accomplish this. As all of this requires time, patience and tact, most of us are usually delinquent in one way or another.

Exercises for the fingers may be either by various types of finger pulleys or traction by rubber bands. A simple apparatus consists of suspending a quart bottle by means of a string or bandage over the edge of a chair or table. Water may be added to the bottle from day to day as the increasing strength of the fingers warrant. The use of a soft rubber ball or atomizer bulb, as well as picking up numerous small articles such as pins, are all good exercises. The caterpillar or crawling movements forwards and backwards many times, may be tried.

For loosening up the wrist joints, I use prolonged hand shaking exercises as well as circular movements while the hand is so grasped. This has the added advantage of exercising the muscles used for gripping.

Elbow exercises consist of flexion and extension while supporting five to nine pound weights or old fashioned flatirons. If practical, the use of a saw or apparatus in which the movements simulate sawing, are advantageous and desirable.

Shoulder exercises vary somewhat, depending on the strength of your patient or the type of his injury. I frequently have them lie on their back on a flat table and then instruct them to make circles with a pencil. By varying the size of the circle and also by changing the elevation of the arm, much good can be accomplished.

Toes are most frequently exercised over small knobs or marbles. For movements of the ankle joint, the use of a pedaling device is advisable. Where available, I have these patients use the foot power old fashioned sewing machine, from which it is always advisable to remove the power belt before exercising. Standing and raising, first on the toes and then on the heels, may also be used for strengthening the calf muscles.

The knee may be strengthened by simple flexion and extension. Continuous walking up and downstairs, as well as bicycle riding are also excellent procedures.

Squatting exercises, starting with twenty-five to fifty times daily and increasing this by ten to twenty more each day, readily develops the hip, thigh and gluteal muscles.

These are simply a few of the exercises used. It is necessary at times to find or devise new exercises for particular cases in order to train or strengthen certain muscles.

The natural use and the exercise obtained by actual physical exertion by work, is, in my opinion, the best way of getting good functional results following injury. It is for this reason that a surgeon should try to provide or arrange for light work for injured employes as soon as possible. Regular work can and should be done as soon as patient is capable.

Believing that an attending surgeon's responsibility is not ended until the best possible functional result is obtained, I feel it is his duty to "follow through," even though the patient is discharged or working. Many patients, especially with compensable injuries, do not consider

they are ready for work until they are entirely free from pain or until the injured member is as good as it was prior to the accident. It takes the greatest tact, an abundance of patience and almost exhaustive efforts to reestablish the confidence of these injured persons in their ability to do work. A surgeon's duty, however, is not done until he has tried to reestablish the patient's confidence to the best of his ability. It is simply the final step of restoration.

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DRUGS AND MALARIA IN THE TREATMENT OF NEURO-SYPHILIS*

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The history of mankind illustrates that the progress of medical arts as a rule goes hand in hand with a refinement of culture and civilization. In Egypt and Greece, medical science was booming during an era of high civilization. This period was followed by decay which reached the climax in medieval times when superstition and cruelty, quackery and barbarism were flourishing and the most incredible and confounding methods were used to unscrupulously exploit the credulity of the masses. In the next few centuries, medical standards received a gradual uplifting until in the last half century our knowledge has grown with the rapidity of an avalanche. We are proud of it. The various branches of our profession are rivaling to outrun each other in progress. Needless to enumerate the wonderful achievements in bacteriology, surgery, endocrinology, radiology, internal medicine, preventive medicine, hygiene, etc. Logically, one should expect that all special branches of the healing arts should have been benefited by this development, but this is not the case with psychiatry. In order to understand the peculiar separation of medicine and psychiatry it is necessary to look for an explanation which offers itself in the historical and cultural development of the problem. For more than a thousand years medicine was dominated by Hippocrates and his pupils; his authority was recognized throughout the ancient world. No one could rival his keenness of mind, his art of description and his

therapeutical suggestions. In his teachings he gave the advice not even to try to treat the disorders of the mind because it was useless anyway. Advice from such an authority was gladly accepted, of course, at the expense of the sick who were driven straightway into the arms of the religious institutions. And in the middle ages, the medical profession was still more discredited by all kinds of quacks, fakers and religious fanatics. Many physicians—even scientifically inclined ones—were preachers at the same time. They declared that mental disorders were due to the influence of witches, and in many instances those unfortunates were tortured in the most shameless way or cremated in the open fire in order to expel witches. Even Felix Prater, in the sixteenth century, who made the first attempt to classify the psychoses properly, believed that melancholia was the work of the devil. Although nowadays psychiatry is a part of the medical science, it is still looked upon as a branch of minor importance by many medical men. Many of us, consciously or unconsciously, still speak of a lunatic or of a maniac or of insanity, which are extremely shallow and insipid terms. The places where mental disorders are treated are termed state hospitals for the insane and, of course, the ignorant person links this designation with a raving maniac locked up in a cell, watched by a guard. This separation of medicine and psychiatry is damaging medicine as well as psychiatry instead of stimulating each other. There is an enormous amount of purely medical material—more than twenty thousand in the institutions of the State of Illinois—a great deal available for scientific research work if medicine and psychiatry could be brought to closer cooperation. It is part of the purpose of this paper to show you the unlimited possibilities of purely medical accomplishment in the psychiatric field.

Syphilis, as the cause of nervous disorders of various kinds, was known for more than four hundred years. The clinical and pathological anatomical study of neuro-syphilis experienced a gradual scientific improvement which reached the height of development in the classical study of Virchow in 1847 and Alzheimer in 1904. With the discovery of the spirochæta, or better termed *treponema pallidum*, in 1892 by Döele, and its definite identification as the causative agent by Schaudinn in 1905, the study of syp-

*Read before the Madison County Medical Society, September 3, 1926.

ilis was finally put on an unquestionable and rational basis. The last link of the chain was closed with a demonstration of the parasite in the nervous tissue of the brain and spinal cord in 1913.

Whereas preventive medicine has invaded the medical field of the infectious diseases with great success, it has practically failed in syphilis, which still remains pandemic throughout the world. Theoretically, we should be able to eradicate the disease, but practically it will exist as long as our present social structure lasts; therefore, in spite of the pessimists, our hope remains with the research worker, and if we only bear in mind that our success stands and falls with an early diagnosis and treatment, our hope is built on a substantial platform. Neuro-syphilis is destructive to the brain, our most highly specialized and intricate organ. If extensive areas of its wiring system have been annihilated by the action of the parasite, directly and indirectly, they are just as well lost to us as if we cut them out with a knife. Those areas will never regenerate. A permanent defect will remain. Small damages aggravated by inflammatory swelling of still reparable degree might be transitory and clear up under treatment. Thus a speech defect, an ocular muscle paresis, a convulsive seizure, a facial palsy might disappear. To discredit the results of treatment without taking into consideration the possibilities and the various limitations would be unfair. The treatment of neuro-syphilis is an endurance test for the one who carries the job on conscientiously and strictly scientifically. Every case requires individual attention. In order to appreciate what can be accomplished if the above requirements are strictly fulfilled, it is necessary not to lose the patient out of sight for a number of years.

All efforts to treat the syphilitic disorders of the central nervous system had to be doomed to failure as long as mercury and iodine in various forms were the only remedies—not that these drugs were entirely inadequate, but their administration alone could not bring about a lasting improvement or even a cure. When the salvarsan era came, there was hope and disappointment and plenty of controversies as to the value of arsenicals in neuro-syphilis. Now we know that the optimists and the pessimists both were justified to a certain extent because the thera-

peutical value of arsenic depends largely on the selection of the cases. I shall discuss this important point under the paragraph possibilities and limitations of treatment. We have a considerable number of newer arsenical preparations, of which the sulpharsphenamine and tryparsamide are most valuable in neuro syphilis. The salvarsan and neosalvarsan both have little spirochaetocidal power, but they inhibit the growth of the treponema in the test tube. Tryparsamide is still less germicidal, and still its action on the syphilitic brain seems to be more efficient. It is erroneous to believe that the value of these drugs depends on their germicidal power. The mechanism of their action is much more complicated. In order to make more clear the possibilities, the limitations of treatment, the mode of action of the drugs and later on malaria and the constitutional factors which enter into the problem, I shall briefly discuss a few important pathological, anatomical and diagnostic problems.

We usually divide syphilis into primary, secondary, tertiary and quaternary stage; the latter one often is referred to as para- or meta-syphilis, comprising the affections of the nervous system. This classification is often misleading, for there is a gradual going over from the primary to all the rest of the stages. Shortly after the primary lesion the disease becomes generalized, just as any other infectious disease, and no distinct line can be drawn between the different stages. Only a rough borderline is drawn by us, and this is an artificial and arbitrary mark only. What appears to be a secondary manifestation often really is a tertiary or so-called quaternary one and vice versa; in fact, there is no such thing as quaternary or para-stage. Gummata and secondary skin eruptions are nothing extraordinary in neuro-syphilitics who are supposed to be in the quaternary stage. More recent advances in the interpretation and technique of spinal fluid examination on the patient and in the laboratory have clearly shown that nervous involvements of at least transitory character are quite frequent in the early secondary stage and are found even before the primary lesion has disappeared. Such investigations prove the necessity of doing away with our old dogmatic and rigid classification of syphilitic stages. The fact that the nervous system in the early stage of infection is more often involved than we hitherto expected calls for pre-

ventive methods. It is the duty of the practitioner to protect his patients from the serious consequences of an advancing involvement of the central nervous system. Think it over; there are millions of people in the United States, maybe six or eight millions, or even more, who some time in their lives have acquired syphilis. We go safe if we presume that much more than a million of them develop early changes of the central nervous system which fortunately in the majority of instances regress. Nonne, this eminent authority, believes that these early changes are part of the skin exanthem. He is most probably right. Skin and central nervous system are biologically very closely related, both are derived from the ectodermal layer of the embryo, the spinal cord and brain originating from a linear groove in the skin. Make a spinal puncture in every case of early syphilis that comes to your attention and you will be surprised how many of your patients show pathological changes of the fluid.

The recognition of these early changes becomes still more important if we realize that all neuro-syphilis is primarily vascular syphilis, belonging to the so-called secondary stage. The virus is imported in the finer vessels; occlusions, granulations, small gummata and other changes develop; the process is invading the brain from the meninges, with their rich blood supply; all neuro-syphilis in the beginning is a meningeal process and only later on the different varieties of neuro-syphilis develop more distinctly, such as gummata in the nervous substance, cerebral spinal lues, tabes and true parenchymatous and interstitial inflammations, commonly explained as paresis, the most severe form of the malady. Theoretically, the lesions may be localized in any part of the brain; consequently there are as many various symptoms as possible localizations. Combinations of multiple lesions still increase the multitudinousness of the symptoms. This peculiarity is found in no other disease in the whole territory of medicine to such a large degree. It is outside of the purpose of this paper to discuss the army of all possible symptoms—they would fill volumes, and a great deal of them are already known to you.

One of the subjects of this paper is to discuss one of our newest methods, the malaria treatment of neuro-syphilis. The foregoing general remarks seemed to be advisable to make you better

understand the important questions which are so intimately interwoven with the problem. In the first place, the drugs which we used up to the present are by no means obsolete; on the contrary they continue to play an important part. To depend on a merely empirical phenomenon which has as yet not been explained in a convincing, scientific way would be an injustice to the sick. Who does not remember the fable in which a dog with a piece of meat went over a bridge and down in the water appeared the image of a bigger piece? While he tried to get hold of the most desirable piece, he dropped the piece he had from his mouth, and meat and image were gone forever. We want to stay on solid ground. We don't want to abolish our drugs; therefore, we cannot agree with those who are willing to stake all on the malaria treatment alone.

It has long been known to careful observers that in many instances chronic mental disorders were markedly improved more or less temporarily by acute febrile diseases, such as abscesses, typhoid fever, pneumonia, relapsing fever, etc. This empirically gained knowledge was the starting point for the idea to utilize the beneficial influence of artificially produced fever for therapeutic purposes. Apparently it was either forgotten or overlooked by the medical world that Rosenblum, in Russia, in the years between 1864 and 1874, had made use of relapsing fever and malaria. He employed this means in the different psychoses, syphilitic and non-syphilitic. His publication, which appeared in Odessa in 1876, was not available in the original and, therefore, I am unable to say whether he used malaria deliberately in paretics or whether he used it just along with his other cases. The fact is that he did not succeed in gaining followers. But the influence of acute febrile diseases upon paretics was too obvious to be unobserved indefinitely. In the years following 1886 experiments with artificially produced abscesses were made here and there by a few men. The parenteral injection of turpentine and other irritants and subsequently of typhoid vaccine, tuberculin milk and different proteins were tried; the success was rather meager. The aim was to find an agent which would produce high fever attacks at regular intervals without doing irreparable damage to the patient; which furthermore could be controlled at a given moment.

There was no such drug yet found, and so the natural consequence was to look for a benign disease which would fulfill the requirements. This way was rediscovered by Wagner V. Jauregg in Vienna in 1917. Whether or not he knew of the work of Rosenblum about a half century before cannot be determined; however, he deserves the recognition because he was led to malaria as a therapeutic agent by deliberately attacking the problem in a logical manner. Following the announcement of his encouraging result in 1918, 1921 and 1922 a number of other European workers became interested. In the last three or four years quite a number of contributions to the subject came from all over this country.

V. Jauregg's original method was to inject intramuscularly one or two c.c. of blood from a non-syphilitic donor suffering from the benign tertian type of malaria. The chills developed after a varying incubation period of eight to twelve days; ten to sixteen paroxysms were allowed and then interrupted by quinine. Later on, other European investigators transmitted the blood from paretic to paretic, and some of them used the intravenous way of application. There is no danger of transmitting syphilis to a non-syphilitic individual if the diagnosis is established correctly. Shock reactions from transmitting of such small quantities of blood do not exist. We have inoculated about 120 patients by the intravenous way and have never seen any anaphylactic shocks. We proceed as follows: Determine all particulars about the donor. Have six patients sit in line ready to be injected in one of the veins of the arm. Have the donor in a separate room so that the other patients could not witness the taking of the blood. Use an ordinary ten c.c. Luer syringe and, if the patient to be inoculated might object to receiving someone else's blood, use a non-transparent syringe, then quickly draw 10 c.c. of blood and immediately inject about 2 c.c. in each recipient, thus avoiding clotting of the blood. No other precaution is necessary. It is our opinion that the intravenous way assures a shortening of the incubation period, gives more uniform results, prevents abscesses and is less painful. Sometimes inoculations have to be repeated, but in spite of this a number of patients do not develop malaria; they seem to be immune. Their number varies between 6 to 8 per cent. Also be sure that the

patient has not received any arsenical within two or three days prior to the injection, because this will interfere with the development of the plasmodium. We have been using the same strain of plasmodium for every twelve months, and during the passage from patient to patient we had opportunity to observe its changeable behavior. At times it seemed to be dead or quiescent; at other time it displayed a surprising activity. During the periods of increased activity there is a change in the morphological aspect of the parasite under the microscope; the ring forms become larger and more susceptible to the dye. After incubation of one-half to sixteen weeks the first two or three chills occur every other day as in the classical type of tertian malaria, but then the picture almost invariably changes, the chills coming on daily. The temperature goes as high as 107°. After ten or twelve paroxysms it gradually becomes less severe and the maximum usually drops down to 101 or 102°. There are more atypical than typical cases—in every instance there is some variation. Inoculation malaria is very capricious and requires a good deal of experience to become familiar with it. Although this paper is not supposed to be on malaria, it will be necessary to mention a few factors which enter into the problem of inoculation malaria.

If you want to inoculate a patient you must be sure in the first line that you are going to use only the benign tertian plasmodium. This type is less dangerous and the easiest one to control. The estivo-autumnal form, very prevalent in southern Illinois and southeast Missouri, and other tropical forms of malaria might prove fatal to the already weakened condition of the neurosyphilitic. By no means is it sufficient to conclude from the patient's history alone what type you have to deal with. A microscopical examination is absolutely indicated. If you are in doubt, you had better get your material from a dependable source. The cultivation of tertian malaria on artificial transportable media is not as yet available, but malaria blood might be transported in a thermos bottle if you prevent the blood from clotting by citrating it. Failures are not avoidable in this way. The best method remains the immediate transmission from patient to patient.

The malaria is propagated among the population only by the *Anopheles* mosquito. The

plasmodium continuously undergoes a generative change. Asexual cycles are interrupted by sexual cycles. The endogenous cycle takes its course in the human body; the exogenous one in the Anopheles. The sexual activities cease entirely in the human bloodstream and can occur only in the mosquito. Thus it seems that the plasmodium can propagate indefinitely in the human body under certain conditions, no sexual period being necessary. Under certain conditions I mean that the plasmodium is transmitted from man to man before the human body produces defensive biological productions which might be an irreparable damage to the parasite. Furthermore, it is probable that after a number of artificial transmissions the plasmodium loses its ability to become sexually active again if it enters the mosquito. We have every reason to believe that inoculation malaria is not any more transmissible through the bite of the mosquito, a fact which is not only very interesting from a biological standpoint but which also eliminates the danger of becoming a menace to the population who live near an inoculated neuro-syphilitic.

Still another biological peculiarity of the plasmodium has to be taken into consideration. The female sexual form or the female gamete for some time is capable of developing and propagating without copulation. Finally, they are converted into an asexual form. Now we know that the plasmodium in certain stages of its development is more sensitive and accessible to the therapeutic action of quinine. This explains why the practitioner meets cases which are refractory to treatment for some time because even if he has killed all sexual and asexual forms, there still remains some plasmodia derived from those modified female gametes which are more resistive to quinine being in an entirely different stage of their life history. Inoculation malaria, on the other hand, is exceptionally easy to control with quinine. This will not surprise you if you have followed the above-mentioned biological peculiarities. We give about 72 grain of quinine, 8 grains by mouth, three times a day. But even smaller doses will stop the chills. Several re-examinations of the microscopical picture of the blood are advisable and will aid you considerably in eliminating the possibilities of a relapse and in following up the blood re-building process. If you do not want to use quinine for some reason, a daily intravenous injection of .05 grains

of methylene-blue in 5 c.c. of water will do the same.

Altogether microscopical control is indicated during the whole treatment. A number of patients develop chills, but their malaria takes the course of an insidiously and slowly progressing hemolysis. A subicteric, toxic condition, slight or no temperature, kidney involvement and other symptoms indicating a physical decline may escape your attention if you do not check up the blood findings. In determining the number of the chills which we expect to allow, we are guided by the general condition of the patient. We have allowed up to 25 chills in robust individuals. The usual number is twelve to sixteen if the patient does not stop his chills spontaneously, as happens not infrequently.

Although malaria in the form used here is a benign disease, it is not altogether without danger to use in a neuro-syphilitic, especially if the case is well advanced and, in addition to that, there is a syphilitic aortitis, aneurysm or other serious heart trouble, malaria should be added only then if no other hope can be offered and if all relatives of the patient are aware of the possible consequence. The physician, to protect himself adequately, should obtain their written consent in every instance.

Before commenting on the results we must be aware of the tendency of paresis to show spontaneous remissions even without any treatment. This is one of the chief arguments of the pessimists. The frequency of remissions of any importance at all is commonly overestimated. Statistical reports on large groups of paretics have shown that spontaneous remissions amount to about $3\frac{1}{2}$ to 4 per cent and they are of rather short duration. According to our experience there are about 2 to 3 per cent spontaneous remissions or decided improvement extending over 6 to 12 months; a very small figure, indeed, if compared with the remissions and decided improvements obtained through treatment. And then it must be borne in mind that paresis is the most unfavorable form to be treated—the results of the treatment are still more encouraging in the large number of non-paretic neuro-syphilitics. Anyone who has witnessed the condition of large numbers of paretics, for instance in State Hospitals, before and after treatment was induced, cannot but become an enthusiastic follower of modern treatment of

neuro-syphilis. You used to find those unfortunates crowding the untidy wards in a most pitiful shape, shaken by convulsions, demented to a level that would defy description. They dragged along month after month until death came as a blessing. And the hydrotherapeutic departments were crowded day and night with excited paretics. Now, after two years of systematic and persistent treatment along modern lines, the Jacksonville State Hospital is proud of the fact that the number of untidy paretics has dropped 92 per cent; that the hydrotherapeutic departments have experienced a drop of over 80 per cent, and that parietic convulsions have become scarce. Indeed, the results are marvelous and from a standpoint of philanthropy they are exceedingly satisfying. Before I discuss our results from a medical standpoint of view I will quote two or three investigators who also had experience with large groups of patients.

The original group of Wagner V. Jauregg in 1917 consisted of nine paretics. Six were definitely benefited and when three of these were still actively at work in 1922 V. Jauregg subsequently inoculated about 200 patients, with the result that over 50 improved to a complete remission. The work was carried on in Vienna by Gerstmann, who gave us a detailed report on 294 cases in 1923. If a man of such unquestionable scientific value tells us that out of these 294 patients 112 had a complete, 90 an incomplete and 92 no remission, then we should realize the importance of the new method.

Since June, 1920, Reese and Peter treated 270 paretics in Nonne's Clinic in Hamburg. They analyze 75 of their cases after a long period of time had elapsed. Their results were 50 per cent complete remissions, 20 per cent decided improvements and 29 per cent without improvement. From Bremen in Germany came a report by Tophoff, who gives much less favorable data—5 per cent complete and 15 per cent incomplete remissions. There are quite a number of smaller groups which have been analyzed by various research workers. The great majority of them present good results and recommend highly the malaria treatment of most forms of neuro-syphilis. I do not want to abuse your patience with too many statistical data from the literature. For the student of the problem there are some 80 numbers which are interesting to read.

Just as it would not be correct to make a final prognosis in a case you have operated on for cancer of the breast 3 or 4 months ago, so it would mislead to interpret the results of malaria inoculation if not sufficient time has elapsed yet. Suppose there comes along a new method of cancer treatment—a method which within a short time does away with the tumor in a way you cannot comprehend, would you not hesitate to stake your patient's welfare on this new method? But, on the other hand, you would not want to deprive your patient of the chance if the new method does not appear dangerous. This is the attitude we assume at the present. In spite of the extensive work we have done with malaria, we are therefore unable to give you an unbiased report on the value of the malaria inoculation alone. All our patients at one time have been treated with drugs. For us, malaria is just an enrichment of our old methods. In another recent paper I said: "Summarizing the results obtained with malaria inoculation, we might say that no doubt it is a step forward. Cases of neuro-syphilis which have been refractory to any other treatment often are benefited to a surprising degree. Drugs and malaria are used in the safest way by combining them" and then: "The majority of the cases are more easily managed, their life is materially prolonged and their physical and mental condition is more comfortable."

We wish to be very conservative in estimating the value of malaria treatment; 50 per cent complete and 20 per cent incomplete remissions as claimed by Peter and Reese certainly are based on too much optimism, provided the cases were not selected. We cannot boast of such improvements, although our cases probably had an even more thorough treatment. Of course, in the State Hospitals one finds a large number of very far advanced cases, some of them almost moribund. We did not omit them from our list of 160 patients. And still we think that our results are excellent—about 15 per cent complete remissions, 52 per cent decided improvements, 33 per cent uninfluenced. Malaria is not a specific remedy, but it opens new ways and has come to stay as long as no better way has been found.

Besides malaria, relapsing fever has been used by a few authors, with the expectation that the closer affinity of this infection to syphilis might

bring about a better success. The fever attacks are higher and can be stopped with neo-arsphenamine, which drug is just the one used in syphilis. The effect is not more pronounced than that of malaria.

If we want to find out why malaria exerts such a striking influence upon the course of paresis and how the results can be improved and if it is possible to find a more rational and scientific way of treatment, then we must study the pathological-anatomical changes in the nervous tissue of inoculated paretics in the first place. Furthermore, we must take into consideration constitutional factors. No satisfactory theoretical explanation has been offered yet in regards to how malaria acts in the paretic and why the maximum improvement does not follow immediately the termination of the chills but usually occurs within one to six months or more afterwards. The high temperatures cannot be fully responsible, although we know that the spirochaeta is very sensitive to temperatures above normal body heat. The spirochaeta therefore might be damaged and its resistance to the defence reactions of the body lowered, but, on the other hand, we observe a similar effect in cases which do not run an excessively high temperature but tending rather to hemolysis. Malaria is not specific, other febrile diseases producing similar reactions, as said above. In such cases substances liberated by breaking down hemoglobin and other cell products possibly play an important role. Malaria, as you know, does not go along with increased leucocyte count; therefore it is hard to hold the leucocytes responsible. They are usually blamed for things, and so I am in a position to take them even here into our speculation. Mueller offers the theory that changes of the vessel tonus occur in various parts of the body—vasodilatation leading to local hyperemia and transudation into the neighboring tissue is alleged to bring about migration of leucocytes along with the serum. The blood pressure falls and the general leucocyte count is lowered in the peripheral bloodstream, while the abdominal vessels are dilated.

Soon this is overcome by the vasoconstrictors which are well functioning in the healthy tissue. But in the affected brain this condition comes on very slowly, thus giving the leucocytes an in-

creased chance to penetrate into the interstitial tissue. No doubt a very nice and clever argument, which would to a certain degree explain why the action of malaria does not solely depend on the temperature elevations. The increased transudation into the nervous structures would then favor a more efficient penetration of arsenicals if applied as long as this condition lasts. However, the hypothesis is somewhat forced and has no underlying experimental basis. Some authors believe that malaria promotes the natural defense reactions of the body, others believe different hypotheses; no one has proven yet which opinion is correct in all probability. I shall not mention the other hypotheses.

The announcement in the literature of the histological findings in malaria brains of paretics is still scarce. The largest number of them has been dissected in von Jauregg's clinic; 35 brains were analyzed in order to determine if there is any parallelism between the clinical remissions and the brain pathology. They came to the conclusion that the degree of the pathological process in the brain is in keeping with the clinical improvement. Remarkable was the decrease of plasma cells which usually are found in abundant numbers in paretic brains. While the meninges still remained thickened to some degree, the cellular infiltration of pia and vessels of the cortex were greatly diminished, only some lymphocytes being observed. The degenerative changes of the ganglion cells, the ganglionic fibres and the glia were too insignificant to allow the pathologist to make a diagnosis of general paralysis of the insane from the histological aspect alone. The opinions are rather divided, as far as the majority of the research workers is concerned; however, there is the tendency to believe that even well advanced changes of inflammatory and proliferative character are favorably influenced to a surprising degree. The influence upon the spinal fluid is reported by many authors to be negligible. Our own experience is that favorable changes in the fluid are possible and are found in even far advanced cases. Only the future investigations can show if these improvements are lasting. I think I cannot enter here into the extensive discussion of the spinal fluid findings and the prognosis connected with them.

One of the chief arguments of the opponents of the malaria inoculation is that in countries

where malaria is very prevalent there is no lack of neuro-syphilis. We answer that we have never said that malaria is preventing the development of paresis after years of infection and furthermore that statistical data from a reliable source covering this question are not available. My experience in the malaria stricken countries of the Near East is that neuro-syphilis seems to be not as frequent as in the Western countries. But this remains open to investigation.

There is one question which we are inclined to overlook, in dealing with syphilis, and this is the problem of the constitution of the body. We really have no concrete idea how far the constitution enters into our modern conception of diagnosis, pathogenesis and therapy. There is no fundamental difference between syphilis of the brain and syphilitic cirrhosis of the liver, for instance. Why does the one patient develop a cirrhosis and the other does not, although both have the same living habits.² And why is it that one of two syphilitics develops paresis, the other does not.² This is not explained by a special hypothetical strain of the spirochæta, as some authors like to suppose. Such a virus has never been demonstrated and is very unlikely to exist for many reasons. Moreover, there is no fluctuation of virulence of the spirochæta, and most of the luetics go through their early infection of the liquor, although they harbor just the ordinary so-called "dermotrop" spirochæta. The ordinary spirochæta is already sufficiently neurotrop if we accept something very naturally, i. e., the variation of the constitution. The syphilis penetrates all organs, but the final accumulation of the parasite will be found there where the most favorable living circumstances exist. Still unknown bio-chemical reactions take place between spirochæta and bodily cells. It is easily conceivable that certain predispositions and inferiority of organs attract the spirochæta—it might be the liver or the aorta or the skin, why not the central nervous system? And so, the constitution, the existing weakness of organs or organ groups with their favorable bio-chemical reactions for the spirochæta, is the primary factor in the localization question of syphilis. The recognition of these finer and very intricate reactions is of enormous importance for the future effort to treat syphilis of all organs, including paresis, more efficiently, more scientifically and more intelligently than we do now.

CHRONIC SUPPURATIVE OTITIS MEDIA*

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Chronic suppurative otitis media is a common disease which at all times constitutes a large percentage of the cases that come under the care of the otologist.

Many of these cases present a difficult, often vexatious problem, because of the widely varying pathologic conditions that may obtain in the ear at the time the patient presents himself for treatment. As to the reason for an otorrhea becoming chronic, it can be stated generally that it is due to the neglect of acute suppurative ear disease.

Very frequently these patients will give a history of running ears of many years' duration, without ever having had any medical attention. Only when they become seriously handicapped by reason of defective hearing does it occur to them to seek medical aid for the relief of the condition. Then because of long neglect, the disease may have become firmly entrenched, not only by involvement of the membrane lining the tympanum and its accessory recesses, but also by invasion of the osseous structures and walls of these spaces, making an eradication of the infection difficult indeed.

There are *two* main objects to be obtained in the treatment of these patients. Namely: the bringing about of a cessation of the otorrhea and improvement, or at least preservation of the hearing present at the time.

The latter consideration is often of the greater importance to the patient since his capacity for making a living may largely depend on his ability to hear.

Therefore, in the treatment of these cases radical measures, which might produce permanent and marked impairment of hearing, unless urgently indicated, should not be resorted to until all other available means of effecting a cure have been exhausted.

The fact that a suppurative ear disease does not yield to treatment in six weeks or three months is no reason why a radical operation should be done. It is possible in some very resistant cases to obtain a cure even after a year or more of persistent treatment, with the most

gratifying results in regard to improvement of the auditory function.

One general principle may be stated as essential to success in the treatment of chronic suppurative middle ear disease, and that is: any local remedial agent employed, to be effective, must reach and act directly upon the tissues of all of the affected area.

Since the pathology of this disease presents a number of types and variations, different procedures become necessary in different cases, in order to carry out this principle.

Let us consider some of these different types.

There is the simple chronic suppurative inflammation of the middle ear, without any marked tissue hyperplasias or new-growths. It may involve only part of the middle ear; the tympanic cavity proper; or the attic; it may involve all of the middle ear, including the Eustachian tube and mastoid antrum. The perforations in the membrana tympani may vary in size, sometimes large, sometimes small. They may be variously situated in the different sectors of the membrane, depending, perhaps upon the location of the greatest intensity of the initial inflammatory process. These cases where no involvement of the bony structures exists usually yield to the simpler forms of treatment.

Somewhat more complicated are the cases in which the development of granulations and polypi has taken place. Where the granulations are exuberant, filling the middle ear spaces, or the polypi large, even occluding the external auditory canal, local treatment with medicinal agents is of no benefit, before these obstructive tissue growths have been removed.

This condition, however, is less difficult to deal with than where erosions and caries in the bony structures have occurred. Where the latter are extensive or situated out of reach by way of the auditory meatus, more or less radical operative measures may be required to stop the otorrhea. There are a number of small bony cellular spaces in the tympanum, for example, in the floor, in the lower part of the anterior tympanic wall (cells of Koerner), in the posterior margin of the epitympanicum (cells of Kirschner), and some deep recesses in the posterior wall of the tympanic cavity.

Sometimes, when these parts are involved in the suppurative process, no amount of treatment

may avail, without a thorough eradication of these cells by surgical means.

In rare cases the infective process may be wholly, or almost so, confined to the attic spaces, or even the space of Prussac. It is not unusual then to find it associated with caries of the ossicles, especially of the malleus. In these cases the perforation is in the membrana flaccida, and occasionally there is a sinus through the upper bony wall of the meatus, at its inner margin, leading into the attic and sometimes posteriorly to the cells of Kirschner, which may also be involved.

Epidermization of the middle ear may have taken place by the epidermis of the external auditory canal having extended through the aperture, provided by a perforation or erosion of the membrana tympani.

From this misplaced epidermal lining there is a constant exfoliation of epithelial cells, which mix with leucocytes and bacteria to produce a mass in which cholesterol crystals are formed. This constitutes the so-called cholesteatomatous mass, sometimes erroneously named cholesteatoma because it is not a true tumor.

These accumulations may fill all of the tympanic cavity, push their way into the mastoid antrum and cells, and by pressure cause absorption of bone. It is not unusual to find, where cholesteatomatous masses have been present a long time, the ossicles disintegrated, the tympanum enlarged through thinning of its walls and the mastoid antrum and cells converted into a single large cavity through necrosis of the bony cellular septa.

It is essential to make a careful examination of these cases, and if possible try to determine the nature and extent of the pathologic processes. Nor should the history of possible contributive etiologic factors, as well as the duration of the disease and effects of previous treatment, if any, be overlooked. A careful inspection of the ear should be made, noting the condition of the membrane, the ossicles, the absence or presence of hyperplasias, the appearance, odor, consistency and quantity of the discharge. Attention should be paid to the condition of the Eustachian tube, to the condition of the nose and throat, the tonsils and the epipharynx. Microscopic examination of the discharge, besides determining the kind of pathogenic bacteria responsible for the disease, might reveal the presence of bone debris

or cholesterol crystals pointing to the nature of the pathologic process.

Functional hearing tests must not be neglected for two reasons: First, to ascertain to what extent the hearing has been damaged; and secondly, in order to determine what improvement, if any, results from treatment.

An inquiry into the general condition of the patient's health should not be omitted. It might reveal some local or systemic disorder, productive of lowered resistance affecting unfavorably the course of the ear affection.

The success in the treatment of these cases, it would seem, can be judged only upon two premises: the stoppage of the otorrhea and the benefit to the hearing.

Where the ossicles are still intact and movable, it is important that they be preserved in their state of motility. If the malleus and incus both have sloughed out, but the stapes still is movable in the oval window, a fair degree of hearing may be retained, if it can be thus preserved. In all operative procedures on the ear these facts should be kept in mind.

If polyps and granulations are present, the first essential is their removal. Otherwise treatment would be of slight avail, as medicinal agents used locally would have very little effect for the simple reason that they would not reach the seat of the trouble.

Even abundant granulations in the middle ear, extending to the attic and the tympanic end of the Eustachian tube, can be removed quite well through the external auditory meatus, either under general or local anesthesia.

Following such an operation a strip of gauze, to serve as a drain, should be introduced into the meatus, its inner end in contact with the inner tympanic wall. The strip should then be lightly folded upon itself till it fills the auditory canal and the conchal cavity. Over this one or more gauze pads are laid and a bandage applied over the whole. This dressing may be kept undisturbed for two or three days, or longer if the outer gauze pad does not become saturated with the secretions. After the first dressing has been removed, the drain should be changed and the canal cleansed, daily for four or five days more. The gauze drain is then discontinued and enzymol instilled in the ear three times a day. With the head on the side, the ear canal should be filled with the fluid, and pressure made over

the tragus, in order to force it into every part of the tympanic cavity and accessory recesses. By its digestive action it causes necrotic tissue, pus and debris to become liquified and easily carried away, thus cleansing the middle ear, and putting it in a condition where antiseptic agents will be more effective. The treatment with enzymol might advantageously be alternated every three days with borated alcohol. If after three to four weeks of this treatment there is still a discharge of pus from the ear, it is evidence that either the curetment was not thoroughly done, or that the infective process involves some part not accessible through the auditory meatus. If, as is sometimes the case, when the first dressing is removed, on the third or fourth day, following a curetment of the middle ear, there is little or no pus showing, the use of enzymol may be omitted and the ear treated locally with the instillation of a two per cent solution of mercurochrome. Remarkably quick and satisfactory results are at times obtained by this mode of treatment.

In suppurative inflammation uncomplicated by hyperplastic changes in the mucosa, or necrotic bone lesions, measures directed towards the removal of the secretions, as dry gauze, wicks, suction, irrigation, inflation, etc., combined with local antiseptic treatment frequently suffice to bring about gradually a cessation of the otorrhea. So-called capillary suction, applied directly to the tympanum through fine canulas, which may be curved so as to reach the more inaccessible parts of the cavity, is at times very useful.

Whenever one succeeds with these simpler modes of treatment, in arresting the otorrhea the function of hearing is simultaneously improved, as a rule.

In certain cases the so-called dry treatment (with gauze wicks) gives the better results. In others the moist treatment, with antiseptic solutions, seems more effective. Sometimes when one of these modes of treatment has been employed for some time, without appreciable benefit, a change to the other may immediately evidence a turn towards improvement. Occasionally, alternating between these two modes will give good results.

Using gauze drains it is essential that the inner end of the strip is placed closely in contact with the opening in the drum head; or, where the perforation is large enough, inserted into the tympanic cavity. The rest of the strip

should be packed rather closely, filling the external auditory canal. It must be changed often enough not to become saturated with secretion. If it remains in the ear after becoming saturated, it no longer accomplishes its object, which is drainage, but rather acts as an obstruction to both drainage and ventilation. Thus, instead of being an aid, it becomes a detriment, apt to cause an aggravation of the trouble.

This is not a suitable method for home treatment, as it cannot be applied by the patient himself, nor very likely by a member of his family. It is used to the best advantage where the patient can come to the doctor's office frequently enough for the proper changing of the drains.

If secretions are thick and tend to become inspissated, the ear canal should be cleansed at frequent intervals with some appropriate solvent. For this purpose the so-called kerosene wetty is a very excellent, non-irritating preparation. With a little cotton, wound around the end of an applicator, moistened in this fluid, crusts and accumulations of inspissated secretions can be removed easily and with the least amount of discomfort to the patient.

A thorough cleansing of the auditory canal and tympanum of secretions, before instilling antiseptic solutions is important for two reasons: first, that the fluid may reach the parts affected; and secondly, that it may come in intimate contact with and act directly upon the inflamed mucous membrane.

The Eustachian tube is frequently involved in the inflammatory process, and clogged with secretions. Air should be forced through it by means of the catheter or by Politzerization, to rid it of secretions, and make it possible for solutions instilled into the middle ear to penetrate into and through the Eustachian tube. This can still further be facilitated by turning the patient's head on the side, affected ear uppermost, and filling the ear with the solution to be used, clear up to the concha. Then, by pressing the tragus back and down over the meatal orifice force the solution through the tympanum and the Eustachian tube. By thus reaching all the portions of the middle ear and its accessory parts, the maximum effect of the treatment will be obtained.

A thorough application of treatment in this manner may clear up cases of long standing otorrhea, previously treated without much bene-

fit by the desultory method of instilling a few drops of some solution or other in the ear, two or three times a day.

If the perforation in the drumhead is too small to admit of free drainage, it may be enlarged to advantage. Unobstructed drainage and free ventilation of the middle ear cavity are both essential factors in the treatment of otorrhea.

Syringing of the ear through the auditory meatus may sometimes be of advantage in acute suppurative otitis media, but is not to be recommended in chronic cases. Neither is the insufflation of powders, as a general rule, as they have a tendency to dry and cake the secretions, forming an impediment to drainage.

In the cases where epidermization of the middle ear has occurred, giving rise to the formation of cholesteatomatous masses, a cure of the condition can ordinarily not be obtained without a thorough obliteration of the adventitious epidermal lining. A radical operation is usually required to effect this end.

In every case of chronic otorrhea the condition of the nose and throat should be considered. Anything that would tend to keep up the infection, by way of the Eustachian tubes should receive appropriate attention. Under this head, among other things, might be mentioned: infected tonsils, adenoids, pharyngitis, rhinitis, sinusitis, etc.

In conclusion a word might be said in regard to prophylaxis. Since a chronic otorrhea is usually the result of neglecting to treat an acute otitis, and since ignorance in regard to the importance of early treatment of ear affections is widespread, there is great need of educating the public on this subject. It is one of the things that should be given a prominent place and much emphasis in the educational campaigns carried on by public health authorities.

DISCUSSION

DR. A. R. HOLLENDER, Chicago: The essayist did not offer a classification of chronic otitis media nor did he exclude organic disease such as tuberculosis and syphilis.

If we are to accept the classification of Alexander of Vienna that otitis media is best classified as 1. simple; 2. surgical, such as those cases showing cholesteotoma, acute exacerbation, involvement of facial nerve, etc.; 3. complicated; then we have a definite working basis and can prescribe the therapy best indicated. The fact remains that conservative methods will bring results in the simple type only.

Recent experimental work has demonstrated the ef-

iciency of metallic ionization. Friel and others have reported splendid results. In this country ionization for chronic running ears is just coming to be recognized as an important addition to our therapy. Zinc is the metal employed. The procedure is very simple and can be carried out in office practice. There are numerous cases on record where the discharge has ceased after one ionization. It is probably the most ideal method we have at our disposal today for chronic otitis media of the simple type.

DR. JOSEPH BECK, Chicago: This paper gives us a very comprehensive method of treatment for these cases and many men might use these methods to the benefit of their patients. The objection I have to the paper, or the incompleteness of the paper, is that it is incomplete in one most important thing, which is the probability of complications. Treating a subject without checking up on the pathological conditions which may be underlying leaves a good deal of uncertainty. The x-ray is not an anatomical study only to see that the mastoid is there. To the ordinary examiner it may be obliterated while an otolaryngologist, who understands the pathology, can diagnose the conditions that are leading toward the attic and bone and in a region of vestibular structure that diagnosis will possibly deter you from treating cases medically that should be operated on.

As to capillary suction there is nothing better to be used that I know of. That method is an advantage and when some say there is no home treatment then I beg to differ. You can give a patient an inexpensive water power suction apparatus by which they can suck out the middle ear in the interim of making office calls.

I enjoyed this paper on conservative operation, because after all radical operations on the mastoid do not always cure but they are done to prevent intracranial complications.

DR. O. J. NOTHENBERG, Chicago (closing): In answer to Dr. Hollender's remarks as to the classification and the omitting of tuberculosis and syphilis. The general condition of the patient is always taken into account, and that, of course, includes these two diseases. Such cases would entail special treatment and this paper did not consider them for that reason. We may have a syphilitic otitis and a tuberculous otitis and also have these conditions without there being specific or tuberculous histories. In regard to zinc ionization, there are only certain classes of cases in which that treatment is really indicated and I believe there are other forms of treatment which will give just as good results in these cases. I want to thank Dr. Beck for his kind remarks about the paper. As to complications, I had them in mind but did not want to enter into discussion of them, in this paper.

X-ray examinations should be made of course. Some plates may show quite distinctly whether or not a pathologic condition is present, other plates not so well. You cannot rely entirely upon the x-ray findings. It takes a lot of experience in this class of work to be able to interpret the plates. However, if one would take x-rays habitually in all cases one might

become able to define normal and pathological conditions as shown by the x-ray. It might be a good suggestion to take x-rays in all cases.

PHYSICIAN AND PHARMACIST.

ALBERT L. LASH, M. D.,
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If we study the history of pharmacy we will see that there always has been a close relation between the physician and the pharmacist. We find that from the earliest times the apothecary was regarded as the assistant of the physician. It was his function to prepare the doctor's prescription as ordered. He not only prepared powders, pills, decoctions, teas, infusions, electuaries, etc., but he also administered clysters or enemas to the patients when ordered to do so by the physician. In the 18th century a chief apothecary or pharmacian was appointed to the great Paris hospital, the Hotel Dieu, in 1755, the first to have the office being a certain Maitre Jacques Vasson, who saw service in the military hospitals of Flanders, where he held the post of apothecary-major under the distinguished surgeon La Martiniere. In 1777 by a royal decree, the Ecole de Pharmacie was established at Paris.

Pharmacy is an old profession, as old as medicine. The bible makes mention of the "dead flies in the ointment of the apothecary," as well as many references to the medicinal virtues of leaves and plants. India, China and Japan bear witness that in ancient times the art of the pharmacist was known in the land. Medieval paintings depict Christ as an apothecary, surrounded by well-known implements of the art.

Pharmacy, like medicine, has undergone more or less steady evolution and development into a distinct profession. In 1754 the code of the College of Physicians of Edinburgh prohibited the keeping of an apothecary's shop by any of its fellows. In England in 1617 a law was enacted prohibiting any grocer to keep an apothecary's shop and no surgeon to sell medicines. Pharmacy today is an honored profession. It has its ethics and its ideals. It has had its triumphs and its heroes. And in spite of the commercialism of the age in which we live the pharmacist deserves, and will continue to deserve, recognition and respect, as one who has an important part to play in modern life. But let us turn back to the relation between physician and pharmacist. As I

said before the relation between the two professions has always been very close, but in spite of this close relation there should be no encroachment of one profession upon the rights of the other. The pharmacist should not malign the physician; he should not disclose to the laity in general the secrets and mysteries that he may know about medicine, he should not counter-prescribe for any kind of ailment as he doesn't know the real action of drugs. The feeling prevails among pharmacists that the doctor who does his own dispensing enters into competition with the druggist and encourages prescribing by the latter. Now, really, there's no sense in a doctor dispensing his own prescription. He is not so well versed in incompatibilities, dosage, etc., as the pharmacist, and besides the pharmacist has to eat three times a day and usually has a wife, a half dozen children who need shoes and a lot of other things, and sometimes a mother-in-law to support. The pharmacist praises the doctor to his patients, and respects him a great deal. First and foremost the druggist is a medicine-man. On him depends the physician's reputation. He holds it literally in the hollow of his hands. The doctor can do a whole lot for himself and the pharmacist by prescribing official Pharmacopeial preparations the exact composition of which he knows, not proprietary articles the composition of which nobody but the man who manufactures them knows. If all physicians and pharmacists would strictly adhere to the rules of ethics, there would be less ill feeling between the professions. Cooperation is the pivot upon which successful business turns. It is a regrettable fact that cooperation between physician and pharmacist does not exist to the degree that should be desired by both parties. The most cordial relation should exist between the medical and the pharmaceutical professions. Both parties should be willing to work in harmony and to boost each other whenever the occasion presents itself. They must respect each other's rights and foster each other's business. I believe that it is about time that the physicians and pharmacists should realize that the only way they can get along in this world of ours is to set about to win the good-will and cooperation of each other and work together for the good of humanity.

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EXCERPTS FROM LITERATURE ILLUSTRATIVE OF THE POPULAR DISTRUST OF THE MEDICAL PROFESSION

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If it is possible to perfect mankind, the means of doing so will be found in the medical sciences.
—Descartes.

Medicine has been defined to be the art or science of amusing a sick man with frivolous speculation about his disorder, and of tempering ingeniously, till nature either kills or cures him.
—Anon.

Medicine, of all human endeavors, is by far the most ancient and sacred, for it, above all, is dedicated to the ministrations of the human body, man's most sacred possession. Ought not medicine then, be the most venerated of the human arts, the most cherished of the sciences? Yet strangely enough, it is not, for almost from its inception, medicine has been the target of all sorts of vilifications and abuses. More often it has been condemned than praised; more often its practitioners have been held in contempt than in regard. What should be accepted as the cause of the existence of so strange a psychology?

Aside from the too prominent allegations that physicians, under pressure of economic conditions, resort too often to illegitimate uses of their profession, and that physicians often misuse their patients in search of scientific truths, the real cause of popular distrust lies with an inherent fault in medicine itself. And more sad is the popular unwillingness to accept that fault as inevitable, at least for the present.

Medicine being that art that concerns itself more than anything else with the life and death of man, is expected to be the most perfect. Yet this is not true, nor can it be true for some time to come. Many of the other human arts whose concern with human life and happiness is not as direct as that of medicine, are, by far, more perfect. Chemical and physical science have attained a higher degree of perfection within a very brief period. Medicine, by its very nature, is as little advanced towards perfection as in previous ages. Mankind, therefore, has placed in medicine a wonderful belief that has continually been shattered. What is believed to be perfect

was far from perfect, and the shortcomings of an art that was not always capable of serving man in his sorest needs, caused many keen disappointments indeed. Because of this, the least inefficiency in medicine always assumes the proportions of a crime; and through centuries of unfortunate experience mankind has come to regard medicine as a sempiternally imperfect art, existing on a precarious right. It would have been folly to abolish so important an art, and because action in such an instance was uneconomical, words, as a medium of expressing disappointment and contempt, were utilized. While no serious attempt in all mankind's experience has been made to banish the medical art from human endeavors, verbal thrusts at it are abundantly found in the various literatures from the earliest times.

The early Egyptians had little faith in the medical priest, and whatever faith they had in him was for his ministrations to the soul rather than to the body. The Greeks' faith was hardly more staunch. Their chilliest epigrams regarded the medicinists. One finds among them a particularly uncomfortable one: "Marcus, the physician, called yesterday on the marble Zeus; though marble, and though Zeus, his funeral is today." The Romans were hardly more praising. One Latin saying affirmed that there is "more danger from the physician than from the disease." Another: "The surgeon buries his mistakes." The great Martial (Epigrams, Bk. I, Ep. 47) declaimed:

"Diaule, the doctor, is a sexton made.

Though he is changed, he changeth not his trade."

In later times these verbal thrusts against the medical profession became more venomous and forsooth more eloquent. Molière, during the seventeenth century, distinguished himself more as an anti-physician than as a dramatist. He vented his spleen into some half-dozen plays, which in those days attained a great deal of popularity. It was quite the thing to make the despised physician appear as ridiculous as possible. In his "*Le Médecin Malgré lui*" (1666), Molière puts the following words into the mouth of his play physician, Sganarelle: "I think I had better stick to physic all my life. I find it is the best of trades; for whether we are right or wrong, we are paid equally well. We are never responsible for the better work, and we cut as we

please in the stuff we work on. A shoemaker in making shoes can't spoil a scrap of leather without paying for it, but we can spoil a man without paying one farthing for the damage done. The blunders are not ours, and the fault is always that of the dead man. In short, the best part of the profession is, that there exists among the dead an honesty, a discretion that nothing can surpass; and never as yet has been known to complain of the doctor who killed him."

In another play, "*Le Malade Imaginaire*," Molière ironically remarks through the lips of the soubrette Toinette: "This is pleasant! they are very impertinent to wish you, other gentlemen, to cure them! You do not attend them for that purpose; you are only there to receive your fees and to prescribe remedies; their affair to get well, if they can!" And not only were these "witticisms" confined to his play and writing alone, for even in his private life, at the least opportunity, was ever eager to air his views concerning the profession. He had become quite famous for this, and one day when the king asked him how he got on with his physician, he replied: "Sire, we talk together; he prescribes remedies for me; I do not take them; and I get well."

Dumas was no less deeply imbued with this spirit of medical distrust, although his writings remain free from the prejudice that stains those of Molière. It is said that one day Dumas dined at the house of Dr. Gistel, a celebrity of Marseilles. After dinner the doctor brought his distinguished guest an autograph album and asked him to add his name to it. "Certainly," said Dumas, and he wrote: "Since the famous Doctor Gistel began to practice here they have demolished the hospital—"

"Flattery!" cried the delighted doctor.

"And in its place made a cemetery," added the author.

Frederic the Great's distrust of medicine remained with him to the end. When Dr. Zimmerman went from Hanover to attend him in his last illness the Emperor greeted him with the words: "You have, I presume, sir, helped many a man into the other world."

In the poetry of those times one finds many slurring references to medicine. Quareles, in his "*Hieroglyphics of the Life of Man*," said: "Physicians, of men, are the most happy; whatever good success soever they have, the world pro-

claimeth; and whatever faults they commit the earth covereth." Broome, in "Poverty and Poetry," declaimed:

"Though patients die, the doctor's paid,

Licens'd to kill, he gains a place

For what another mounts the gallows."

Dryden committed himself in the couplet:

"The first physicians by debauch were made;

Excess began, and sloth sustains the trade."

Addison, the brilliant essayist, wrote in the *Spectator* a paragraph expressing his views of medicine and physicians: "We may lay it down as a maxim that when a nation abounds in physicians it grows thin of people. . . . This body of men in our country may be described like the British army in Caesar's time. Some of them slay in chariots and some on foot. If the infantry do less execution than the charioteers it is because they cannot be carried so soon to all quarters of the town and dispatch so much business in so short a time."

In our own enlightened times attack on the profession still continues to come through the medium of plays, novels, essays and other forms of written expression. It has become quite the fashion. The great and the near-great in the profession of letters will continue their little thrusts. They may revile the doctor for the amusement of the public, but how readily do they run to him in case of illness, and with what precaution do they follow his instructions! Perhaps they are not so serious, after all. George Bernard Shaw has become famous for a great deal of nonsense, and for his freak beliefs and practices. It would therefore be unusual if he had not had his say on the medical profession. Among his plays is one called "The Doctor's Dilemma." It is not a masterpiece in dramatic literature, yet it is interesting and amusing. Perhaps some of the points are true, but many, many of them are fallacious. The preface to that jubilant satire itself is of great interest; the following excerpts, particularly, are worthy of special attention:

It is not the fault of our doctors that the medical service of the community, as at present provided for, is a murderous absurdity. That any sane nation, having observed that you could provide for the supply of bread by giving the bakers a pecuniary interest in the baking for you, should go on to give to a surgeon a pecuniary interest in cutting off your leg, is enough to make one despair of political humanity. But that is precisely what we have done. The more appalling

the mutilation, the more the mutilator is paid. He who corrects the ingrowing toe-nail receives a few shillings; he who cuts your insides out receives hundreds of guineas, except when he does it to a poor man for practice.

Scandalized voices murmur that these operations are necessary. They may be so. It may also be necessary to hang a man or pull down a house. But we take good care not to make the hangman and the house-breaker the judges of that. If we did, no man's neck would be safe and no man's house stable. But we do make the doctor the judge, and fine him anything from a sixpence to several hundred guineas if he decides in our favor. . . .

Again I hear the voices indignantly muttering old phrases about the high character of a noble profession and the honor and conscience of its members. I must reply that the medical profession has not a high character; it has an infamous character. I do not know a thoughtful and well-informed person who does not feel that the tragedy of illness at present is that it delivers you helplessly into the hands of a profession that you deeply mistrust, because it not only advocates and practices the most revolting cruelties in the pursuit of knowledge, and justifies them on grounds which would equally justify practising the same cruelties on yourself or your children. . . . but when it has shocked the public, tries to reassure it with lies of breath-bereaving braziness. That is the character the medical profession has now. It may be deserved or it may not; there it is at all events, and the doctors who have not realized this are living in a fool's paradise. As to the honor and conscience of doctors, they have as much as any other class of men, no more and no less. And what other men dare to pretend to be impartial where they have a strong pecuniary interest on one side? . . . To offer me a doctor as my judge, and then weigh his decision with a bribe of a large sum of money and a virtual guarantee that if he makes a mistake it can never be proved against him, is to go wildly beyond the ascertained strain which human nature will bear. It is simply unscientific to allege or believe that doctors do not under existing circumstances perform unnecessary operations and manufacture or prolong lucrative illness.

Have Shaw and those who have gone before him hit upon the real reason of the people's distrust of the medical profession? It is my belief that they have not. Perhaps the one person who has come nearest to the truth was Cicero, who asked: "What is the good of a physician if he does not effect an absolute cure?" That is just it. Mankind expects too much, and perhaps rightly, that a physician be perfect in his art. Mankind may have patience with those who have not attained so high a degree of proficiency in matters where inanimate objects are concerned, but if a group of people set themselves up in a

practise that deals exclusively with the human being himself, matters of health and life that are related to that human being, that group of people must be perfect. Yet this is not so unreasonable as it may seem. The physician is not perfect, and mankind is impatient, and this impatience is expressed through many mediums, through actions, speaking and writing. There is no doubt that unfavorable expressions will continue to come, and they will continue into the future when medicine will attain as near perfect a state as possible with our human faults and frailties.

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PROLAPSE OF THE RECTUM IN CHILDREN

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Prolapse of the rectum in the child is not primarily a surgical condition. Far too many patients with simple prolapse are unnecessarily operated upon. This is probably caused by the fact that the text-books on the diseases of children do not forcibly emphasize the non-operative treatment, and the outstanding features in such books are the pictures showing the variety of surgical technique that is used. The text-books of general surgery quickly slide over the non-operative treatment, giving the impression that surgical intervention is usually resorted to.

In the last four or five years, some seventy patients have applied to the Washington University in the out-patient department. Quite a number of these patients have been found to be suffering from hemorrhoids or simple polypi. A few of these have been lost so that the end result could not be learned, and a few having become discouraged at the length of the treatment have been operated upon in other clinics. Twenty-five patients have found their way into the St. Louis Children's Hospital for treatment. Quite a number of the hospital group were not referred to the hospital directly on account of the prolapse of the rectum, but for other more urgent conditions. As example, summer complaints, whooping-cough, and rickets.

Prolapse of the rectum is seen at all ages of life. It is seen as a congenital affair, through early childhood, occasionally in mid-life and

again and more frequently in the aged. This paper is limited to those types most frequently seen in infants and young adults. In the entire span of life, more people develop prolapse between the age of five months and five years than all the other ages combined. Fortunately, these very young patients are the ones who best respond to treatment.

The nomenclature describing prolapse of the rectum is very confusing since one author will establish one classification which is wholly at odds with some other authority used in describing the same condition. The three terms are partial prolapse, complete prolapse, and procidentia. Again, these are subdivided into anal, rectal, and sigmoidal. The term procidentia recti usually means that the entire bowel has dropped down outside of the anus. But this is also the condition in a complete prolapse. A partial prolapse is a protrusion from the rectum of the loose mucosa folds, and does not involve the other coats of the rectum. In the mildest case only the mucosa and skin at the anal margin are forced down, while in the complete prolapse the muco-cutaneous lining is not drawn down and the finger can be inserted between the margin of the prolapse and the normal wall of the anus. In the higher types as the sigmoidal and upper rectal, the protruding mass has first to be reduced and the force continued until the tumor is felt to disappear, which means that the invagination has been completely reduced. The latter part of this procedure may require the use of a proctoscope. We will drop the term, procidentia and use instead partial and complete prolapse of the rectum as was suggested by Stauffer in discussion of an article on classification by Martin.

A differential diagnosis is very important as the etiology plays a great part in outlining the subsequent treatment. Hemorrhoids occur very rarely in children but may be mistaken for a partial prolapse of the anus or lower rectum. Polypi are rather frequently seen in children and the chief symptoms are intermittent bleeding, occasional presentation of a mass protruding through the anus, and attacks of straining at stool which sometimes bring on an actual prolapse. The diagnosis is made with the examining finger by locating the small pedicle of attachment, or by actually exposing the mass through a speculum. Of course, if a prolapse

has occurred, the removal of the polypus will remove the cause of straining and the prolapse will be cured. An intussusception of the large bowel may cause symptoms very similar to prolapse of the bowel inasmuch as there is a decided straining at the stool, the passing of blood and the occasional presentation of the tumor mass at the anus. The author has seen one case of intussusception in which the ileum presented at the anus.

Treatment—The first indication in prolapse of the rectum is to reduce the protruding mass back into the rectum. This, the physician should attempt to do at his first visit and it is his duty at this time to instruct the parent or the nurse in the technique of this simple manipulation in order that they may be able to reduce the prolapse at the instant that it may recur. Each hour the bowel is allowed to remain outside the pelvis the more difficult it becomes to reduce it. The bowel quickly becomes edematous for two reasons, the first being that the dependent position favors edema, and the second that the sphincter constricts the return of venous circulation. In neglected cases, this edema has progressed to the stage where lessened circulation actually resulted in gangrene. This does not occur frequently inasmuch as the sphincter rapidly loses its tone and the circulation is in no wise constricted.

The prolapse in children may be any size from a walnut to an orange. In the chronic, easily reducible types, the mass not infrequently protrudes from two to three inches. The general shape is usually that of a pear with the cone down and at the distal end is a transverse slit. It is characteristic of all chronic cases to have a loose relaxed sphincter in which the muscular tone is practically gone. This is not the result of any nerve involvement but is caused by the frequent distention as the prolapsing mass passes through the sphincter muscle. In early cases the bowel mucosa is a normal pinkish red in color and has a soft velvety feel. As the case becomes chronic, however, the color changes to a darker red and the entire surface is covered with strings and patches of grayish mucus. Also, hemorrhagic areas may appear upon various parts of the tumor and even areas of ulceration may develop. The soft velvety feeling is lost and the tissues feel thick and boggy.

The reduction of an early case is a very simple procedure. Placing the child across the

knees face down, head and shoulders lowered, and thighs spread, the physician first attempts gentle pressure with the hand well covered with vaseline. On account of the mass being hard to grasp, due to its slickness, a soft linen handkerchief covered with vaseline on one side, is of great help. If there is any swelling of the prolapse, gentle massage from the tip down towards the anus will help force out the edema, and greatly reduce the size.

This manipulation and massage may require half an hour, but at no time should force be used to produce reduction. Where this method fails, hot fomentation should be applied with the child resting in bed face downward and with a pillow elevating the hips. At four hour intervals the mass should be massaged. It is advisable always to attempt to reduce the edema before replacing the mass because following reduction there is often continuous straining, attempting to pass the tumor which acts as a foreign body. It is very seldom necessary to give an anesthetic if the physician does not become impatient and try to hurry the case too rapidly. Even where ulceration has taken place fomentations will often reduce the mass so that it can be returned. In October, 1924, a case was admitted to the St. Louis City Hospital with a mass the size of an orange. Although not reducible at the time of entrance, following twenty-four hours of hot packs, the tumor was easily manipulated without an anesthetic. Where the prolapse has already undergone gangrenous changes, to the extent that the child is showing signs of sepsis or general peritonitis, some modified type of a Whitehead operation should be performed that will remove the protrusion and at the same time will preserve the sphincter. In certain severe types, not only is a prolapse present but there is a very definite loss of the perineal muscles which causes a herniation containing the small bowel. A loop of the ileum has been known to become strangulated in this hernia and requires radical operation.

One patient a year and a half old without previous history of illness fell down a flight of stairs and when picked up by the mother, was found to have a prolapse of about two inches. This is the only patient admitted to this hospital where trauma was directly the cause of prolapse. A number of infants develop prolapse following the prolonged paroxysms of whooping cough,

some from constipation, and others during attacks of diarrhea. Badly nourished, rickety infants are more subject to prolapse than the healthy child. In cases with diarrhea it is advisable to attempt to keep the prolapse reduced while curing the diarrhea rather than trying to cure the diarrhea and then reduce the bowel, because the prolapse so often is a factor in keeping up with the frequent stools.

The skin between the folds of the buttocks and down the inner side of the thigh is nearly always excoriated, caused by the continuous mucous discharge and the escape of liquid feces. Frequent bathing and drying the parts are necessary in all chronic cases in order to prevent this inflammation. Cases of paralysis secondary to spina bifida with prolapse of the bowel are very difficult to control or correct. Whatever may be the etiological factor producing the prolapse, it should receive treatment at the same time that the prolapse is being cared for. Very little can be expected in the way of a permanent cure in prolapse developing during an attack of whooping cough until the paroxysms have subsided.

After the condition has been definitely diagnosed and the prolapse reduced, the buttocks should be drawn together and held in position with straps of adhesive. These straps should be allowed to remain in position for a period of ten days before removing, and should extend from one trochanter to the other and the lower margin of the strap should be just above the anal outlet. It is advisable to keep the patient in bed for a period of ten days, and as nearly as possible on the back. The child should be encouraged to move the bowels at stated intervals, for example, morning and night and where necessary an ounce of glycerine introduced with a small catheter will help the matter along. The child should not be allowed to sit up on a bed-pan or vessel, but should lie upon the back with a pad between the thighs, or the child may be permitted to lie upon the side to evacuate the bowel. During the time that the child is actually evacuating the bowel, the mother or the nurse should be instructed to press the buttocks gently together in order that prolapse may not occur. The skin should be carefully cleansed with a mild soap and water, and thoroughly dried. When the child does not respond by co-operating with the mother, that is the spoiled child, hospital care

is advisable during this period of training. By the end of ten days, it will be noted that the sphincter muscle has contracted and often fully regained its power. The child may then be allowed to get out of bed but should be encouraged to evacuate the bowels in a reclining posture for a period of another month, or in obstinate cases, for a period of two months. The strapping should also be continued until the physician is satisfied that the sphincter control has been fully established. All faulty, unhygienic habits should be corrected, the diet carefully regulated, and when the patient finally assumes an upright position for evacuation, he should be instructed to move the bowels at once and not linger upon the stool. Note: No type of pad of conical shape or otherwise should be placed between the buttocks to hold the prolapse back in place, and never under any circumstances, should a pessary that presses against or enters the rectum be used, although it is recommended in some texts and thoughtlessly copied in others.

Nearly all children are found to have a partial prolapse involving only the anus and lower rectum. By following the simple treatment above outlined, in the vast majority a cure will be effected. Failures are generally due to mistaken diagnosis, lack of home co-operation, the uncontrolled child, and the physician who does not enter in a whole-hearted fashion in the attempt to affect a medical cure. Therefore, in the small group which does not respond, there is offered another procedure which is less formidable than most of the operations recommended for the cure of prolapse.

In 1919 Leonard Findlay, of Glasgow University, while visiting in Geneva, learned a method used in the treatment of prolapse of the rectum in children as practised by Professor D'Espine which consisted of the injection of alcohol in the perirectal spaces. The idea of the injection of chemicals was not a new one, for at various times ergot, carbolic acid, white oak bark, and a combination of alcohol and glycerine have been used. None of these drugs have evidently proved successful, and particularly with carbolic acid, serious complications have arisen, so that these methods have apparently been dropped.

In 1921 Findlay reports a series of twenty-two patients ranging in ages from five months to three and a half years, treated by the alcohol

injection, following Prof. D'Espine's technique, in which nearly all of the cases were cured immediately and the remainder were greatly benefited.

In 1923, a total of forty-one patients are reported in a second communication from Findlay. In seven cases, the prolapse had been in existence for less than one month, in ten cases it had been present for more than a year, and in two cases the operation had to be repeated once, and in one case, twice. Two cases were much improved and two cases showed no improvement at all. The rest of the cases were entirely cured. No complications developed.

In 1922, Alexander, of Philadelphia, reported eleven cases with eleven cures, following the D'Espine treatment.

Brown and Drake of Toronto, 1924, reported three cases with two cures, and the third case in which the prolapse did not recur in the six days following the injection at which time the patient developed otitis media and died of broncho-pneumonia. The post mortem findings in this case are of great value as it is the first one reported in which an opportunity has been offered to study the tissues surrounding the rectum following an injection. There were found about five cms. about the anus, small hemorrhagic areas surrounding the rectum which contained many young fibroblasts. There was no indication of any ill effects. This more or less substantiates one of the theories advanced by Findlay as bringing about a cure, that is, the formation of adhesions between the rectum and the pelvic floor. The other theory is the probable return of tone to the sphincter ani.

The technique of the D'Espine method of alcohol injections is as follows: The patient is prepared by purgation or enema. The perineum is prepared in the ordinary way for operation. The child is given a general anesthetic with the knees flexed upon the abdomen, and held in position by an attendant. An ordinary exploring syringe is filled with ninety-five per cent. alcohol, with a needle at least two and a half inches in length. If the prolapse is down at the time, or should it come down as a result of the anesthetic, it should be reduced and the left finger inserted into the rectum. The needle is introduced on each side one-fourth inch from the anal margin, and inserted to a depth of two to two and a half inches. At this point, 1.5 ccs.

of ninety-five per cent. alcohol should be injected. The finger in the rectum acts as a guide and prevents the puncturing of the rectal wall with the needle. Care should be taken that the needle does not pass too far anteriorly. The puncture wounds are sealed with collodion, and the buttocks strapped. The after care is exactly the same as previously outlined in the medical treatment.

In the summer of 1925, one child has been successfully treated in St. Louis Children's Hospital by this method. Four other patients received in the same period are at present progressing favorably under the medical treatment, so we do not see the indication for resorting to the alcohol method.

No mention will be made in this paper of the various operations for prolapse of the rectum, except to say that many failures result and the lives of these young patients are often jeopardized if not lost. None of them should be resorted to if there is even a remote possibility of effecting a cure without. The cauterization whereby long lines are burned in the longitudinal axis of the gut, is not without danger inasmuch as peritonitis follows the sloughing through the bowel wall and recurrences of the prolapse are far too common.

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LIVER EXTRACT IN THE TREATMENT OF CANCER

Liver extract is the latest addition to the long list of weapons with which medical science seeks to stem the rising cancer death rate.

The work with liver extract, which in the United States has been used with some success in treating high blood pressures, was initiated by Dr. John R. Howitt of the medical school at the University of Western Ontario. He based his theory on the fact that since the liver is disproportionately large during embryonic life, when it does not secrete bile, it must have some other function. Its relatively large size suggested that it might exercise some influence on the extraordinary growth that the human body undergoes during the embryonic period. As cancer is a manifestation of abnormal cellular growth, Dr. Howitt decided that the effect of the active principle of liver on such a growth would be worth trying.

In his first experiments he injected extracts from

the livers of pig embryos into cancerous mice. The results were so encouraging that liver extracts, this time from beef, were tried on hopeless cases of human cancer too far gone for operation.

"In one patient there was a complete disappearance of the tumor mass," says Dr. Howitt in a report of his results to the scientific journal, *Nature*, "in others still under treatment a reduction in the size of the growth has been noted. In every case the progress of the disease has been arrested and the life of the patient prolonged beyond that of the prognosis given before the treatment commenced. No radical claims are advanced for this treatment, but the results obtained clinically have warranted a more extensive investigation which is now being carried out at the University of Western Ontario, London, Ont., and the McGregor-Mowbray Clinic at Hamilton."

Though the advance is slow, the concentrated forces of scientific research are closing in on modern humanity's most dreaded plague. The lead treatment of Prof. Blair Bell of Liverpool has likewise made considerable progress in the last few months, it is announced. Sufficient improvement has been made in the form of lead used by Prof. Bell to warrant its being put on the market both in England and the United States in the near future, according to latest reports from his laboratory at the University of Liverpool. Formerly the great drawback of the method was due to the fact that the particular preparation of lead that gave the best results was so unstable that its curative properties would last only a short time.

A limited number of physicians who wish to take up this work will be trained by Prof. Bell in the technique of administering colloidal lead, so that this new treatment will now become available to greater numbers of sufferers. In spite of its improvement, however, on account of the poisonous character of all lead compounds, only cases on which all usual methods are powerless will be accepted for treatment.

DANGER IN IODINE

Jackson asserts that not only may symptoms of hyperthyroidism be induced by the careless use of iodine, but in some instances the condition may become so grave, as the result of the ignorant use of this drug, as to produce a fatal termination. Eight of his patients with adenomatous goitre suffering from these symptoms had been treated by the same physician with iodine and three terminated fatally. Should such a condition be induced, the only hope of benefit is the prompt discontinuance of the drug, prolonged rest and sedatives. So dangerous is iodine that Jackson has no fear in asserting that iodine hyperthyroidism has a higher mortality than any other form of toxic goitre, and in those who are subjected to thyroidectomy he finds that their chances of recovery are diminished, they often remaining delirious for days, suffering a stormy convalescence with an alarmingly high pulse rate.—*Therapeutic Gazette*.

Society Proceedings

ADAMS COUNTY

The meeting held at the Elks' Club, September 13, 1926, was called to order by the president at 8:20 P. M. Twenty-nine members and three guests were present.

Dr. Grant Irwin reported for the entertainment Committee that the picnic held last month was without doubt the most successful the society has had in many years. Dr. C. D. Center, chairman of the public health committee, sent a written report concerning the proposition of handling any emergency disaster that might occur in Adams County. The report was as follows:

"Provision 1. Should disaster arise in one or more of the factories of Quincy, the doctor in charge of the accident work in such factory shall be considered as the directing head for necessary relief work.

"Provision 2. Should there be widespread disaster in the city, or county, the directing head for relief work shall be a committee of five, said committee to be constituted and organized as follows: (a) the committee to be appointed by the President of the Adams County Medical Society; (b) the committee to consist of the chairman, or president of the staff of Blessing Hospital and of St. Mary's Hospital; (c) three other members of the Adams County Medical Society. This committee shall organize in the following manner: (1) The selection of a chairman who shall direct the relief work. He shall specify the chairman, or president of each hospital staff to direct the work at each respective hospital; (2) the committee of five shall further designate one of the members to care for work which may require the establishing of an emergency hospital. There shall also be selected one member of this committee whose duties it shall be to call to its aid any and all doctors needed for emergency work, either in the open, in either hospital, or in an emergency hospital; (3) one member of this committee of five shall be designated to look after, and be responsible for the procurement of supplies of every needed nature; (4) one member of this committee of five shall be designated to handle all matters pertaining to sanitation and hygiene. Responsibility of the relief work as indicated shall rest on the chairman who may be selected by this committee of five."

The report was received and concurred in. A letter from the American Society for the Control of Cancer relative to a publicity campaign was read and turned over to the public health committee with power. The secretary made a motion that the public health committee make an investigation of the various candidates seeking public office for the fall election and ascertain from them their attitude toward medical matters. Seconded and carried. The application of Dr. Milton Bitter, for membership in the society was read and ordered turned over to the board of censors.

Dr. Neal Moore, Department of Urology of St.

Louis Medical School, gave a very interesting talk demonstrated with lantern slides on "Non Calculus Obstructions of the Ureter." This paper was discussed by Drs. Pollock, Koch, Jurgens and finally closed by Dr. Moore. Dr. J. A. Koch described the clinics conducted at Cook County Hospital under the auspices of the Chicago Medical Society during the past summer. Dr. Walter Stevenson showed motion pictures of the Adams County Medical Society picnic held last month. Dr. Koch made a motion that we extend Dr. Moore a rising vote of thanks for coming to Quincy to address the society. Seconded and carried. Dr. Nickerson made a motion that we extend Dr. Stevenson a rising vote of thanks for the motion pictures of the picnic. Seconded and carried.

Adjournment was ordered at 10:25 P. M.

HAROLD SWANBERG, M. D.,
Secretary.

GREENE COUNTY

The Greene County Medical Society met in regular session in the Chamber of Commerce rooms in White Hall, Ill., Sept. 10, 1926.

The president being absent the meeting was called to order by Vice-President Dr. F. H. Russell, at 11:30 A. M.

The minutes of the previous meeting were read and approved. The secretary reported two members in arrears for 1926 dues.

Moved by Dr. Howard Burns and seconded by Dr. J. S. Billings that the secretary be instructed to draw at sight, on all members for annual dues each year. Motion carried.

The secretary read the recommendations of the Committee on Medical Relief in Disaster of the A. M. A. in which the committee recommends that the president of the County Society is instructed and authorized to assume charge of the situation and direct relief work until other organizations can get on the ground. The recommendation follows viz: "The plan then would be that the American Medical Association should direct that immediate supervision of medical relief, until taken over by proper organizations, should be a function of its officers as follows: In counties the president of the County Medical Society should be the director of disaster relief.

The State Director of disaster relief should be the president of the state society. The functions of the county or local director of disaster relief would be to assume charge, act as captain in systematizing, directing and controlling activities in immediate relief.

He should feel that he is responsible for the direction not only of the profession but also of the volunteers that come in. The president of the county society should be allowed if he wishes, to deputize the direction of relief to another member of the profession of his choice and this act should give his deputy full authority to function in his place."

Moved by Dr. Burns and seconded by Dr. Billings

the foregoing recommendations be adopted and put into practice by this society. Motion carried.

The meeting was then adjourned until 1:30 P. M. and we repaired to Hotel Stocks for dinner and a social hour.

At 1:30 P. M. the meeting was again convened in the rooms of the Chamber of Commerce with President O. L. Edwards in the chair. Dr. E. E. Jouett presented a carefully prepared and instructive paper on "Psoriasis" and reported a case.

Dr. Isaac D. Rawlings, Director of Public Health of the State of Illinois, then read a very practical paper on "Preventive Medicine and Public Health Promoted Through Co-operation."

Dr. R. C. Cook of the Department of Child Hygiene then spoke on "How the Family Physician Can Assist in a Public Health Child Hygiene Program."

A lively discussion of the papers of Dr. Rawlings and Dr. Cook then followed and much interest was manifested. The paper of Dr. E. E. Jouett was then taken up for discussion and many interesting points were brought out.

Moved by Dr. D. H. Garrison and seconded by Dr. A. R. Jarman that a committee consisting of one physician from Roodhouse, one from Carrollton and one from White Hall be selected by the chair to take up certain propositions for the benefit of Walton Hospital. Chairman requested time for his selection of committeemen.

The censors reported that our December meeting will be held in Roodhouse. Meeting adjourned.

Fourteen members and ten guests were present.

W. H. GARRISON,
Secretary.

Marriages

CARL ALFONS BACON, Chicago, to Miss Catherine Crane Lillie of Woods Hole, Mass., September 12.

ARTHUR F. HAAG, Chicago, to Miss Lucille Isabelle Beggs of Hudson, Wis., August 21.

BERNARD J. LACHNER to Miss Anne L. Canty, both of Rock Island, Ill., at East Moline, August 21.

JEROME L. ROSENGARD to Miss Sylvia Pollack, both of Chicago, July 25.

EDWARD JULIUS STIEGLITZ to Miss Lillian Peterson, both of Chicago, September 2.

Personals

Dr. Isaac D. Rawlings, state health commissioner, addressed the St. Clair County Medical Society, East St. Louis, September 2, on "Preventive Medicine."

Dr. Earl B. Miller, Fort Lyon, Colo., has been

selected as superintendent of the McDonough County Tuberculosis Sanatorium.

Dr. Harry E. Mock will deliver an address before the Fifteenth Annual Safety Congress to be held at Detroit, October 25-29, on "Human Salvage."

Dr. Albert Barlow Hale, for many years a practitioner of medicine in Chicago, and from 1901 to 1903 associate clinical professor of ophthalmology at Rush Medical College, has been appointed professor of economic geography at the University of Porto Rico. Dr. Hale withdrew from practice in 1905 to travel in South America and for many years thereafter was a compiler for the Pan-American Union, the headquarters of which is in Washington, D. C. Recently Dr. Hale has resided in Chicago.

Dr. Ralph H. Kuhns, Professor of Pediatrics at the Illinois Post-Graduate Medical School, Chicago, spoke at a meeting of the medical society of Oshkosh, Wisconsin, September 28th, on the subject of "The Problem of Asthma in Children," and will speak at a meeting of the Woman's Club of Sterling, Illinois, November 6th, on the subject of "The 20th Century Child."

Dr. Ernest Donald has been appointed city health physician of Marseilles.

Dr. Samuel E. Parr, Ottawa, has been elected county physician.

Dr. Albert Merrill Miller has been appointed to the newly created position of consulting surgeon at the Soldiers' Home, Danville.

Dr. Willard P. Earngey, Rockford, has been appointed county physician to succeed Dr. Clarence H. Boswell, resigned, who held the position for nine years.

Dr. Earl B. Miller, formerly of the Veterans' Bureau Hospital at Fort Lyon, Colo., became superintendent of Elmgrove Sanitarium, Bushnell, Ill., September 2; this sanitarium is the McDonough County tuberculosis hospital.

News Notes

—The Chicago Tuberculosis Institute has been instrumental in sending 153 mothers and children to camps in this region during the summer.

—It was reported, September 7, that Cletus Watson and his wife, Ella, of Cowden, died within a few hours of each other of "milk sick,"

following an illness of only eight hours; James Mansfield died about two years ago on the same farm of "milk sick."

—The Chicago Medical Society gave a dinner, September 14, to the presidents and secretaries of the fifteen branches to plan for the annual dinner of the society and the membership drive, which will begin October 18; this was the second meeting of its kind in the history of the society.

—The Chicago Tuberculosis Society will hold a joint meeting with the Chicago Medical Society, October 20; foreign representatives who have attended the International Union Against Tuberculosis in Washington, D. C., will address the meeting.

—The sixth annual dinner of the Chicago Medical Society will be held at the Hotel La Salle, Wednesday, October 13. The dinner will be informal and it is hoped that physicians and their families will bring their lay friends. There will be dancing in the Grand Ballroom and cards and the speaker of the evening will be President Max Mason of the University of Chicago.

—Physicians in attendance at the Cook County Hospital summer clinics, which were conducted for the first time under the auspices of the Chicago Medical Society, came from many downstate cities as well as from Chicago; many of them signed a resolution, August 14, expressing appreciation of the effort on the part of the Chicago Medical Society to promote postgraduate instruction and the hope that this will be followed by similar postgraduate courses.

—The Vermilion County Medical Society held an open meeting, September 7, at Danville, which was addressed by Dr. Hiram E. Ross on "Cooperation of the Medical Profession and the Public for Better Community Health"; Dr. Frederick A. Baumgart, "Elementary Physiology"; Dr. William C. Dixon, "Milk"; Dr. Elmer B. Coolley, "Conquering Diphtheria," and Dr. Edwin C. G. Williams, "The Fly Pest."

—The Chicago *Daily News* awarded \$1,000 to D. Herman N. Bundesen, city health commissioner, September 9, in accordance with an announcement made a year ago that such award would be made to that resident whom the *News* should adjudge to have "performed the most beautiful action or done the most beneficial thing for humanity." The work of Dr. Bundesen for

the health of children, and in particular the pure milk campaign inaugurated this year, was considered as entitling him to the award.

—A special relief train of seven cars carrying food, clothing, bedding and medical supplies provided largely through the agency of the American Red Cross left Chicago, Monday, September 20, for the storm devastated area of Florida. The medical personnel is reported to have comprised about thirty Red Cross nurses in addition to nurses from various hospitals of the city, and ten physicians from the Cook County Hospital, five each from the Presbyterian and Wesley hospitals, three from Mercy Hospital, three from the city health department, and two each from St. Bernard's, Augustana, West Suburban and Auburn Park hospitals.

—The sanatorium in Lincoln Park maintained for the last forty summers by the Chicago *Daily News* and the public will now remain open throughout the year. The hospital portion of the building has accommodations for more than forty patients; there will be a staff of nurses and physicians; all service will be free without regard to race or religion. The *Daily News* has always paid for the executive expenses of the sanatorium; the other expenses are met by contributions from the public to the "fresh-air fund." The late Victor F. Lawson contributed \$167,000 to the cost of the new building when it was completed in 1921. The sanatorium registered 4,054 babies during the summer of 1925.

Private and public water supplies subjected to pollution in the recent floods in parts of Illinois have contributed to the spread of typhoid, which, September 22, had reached the highest level of the year. The state health director, Dr. Isaac D. Rawlings, urges that all water supplies be guarded with the greatest vigilance during and after the floods, and that private sources of water subjected to flood conditions be boiled before drinking.

Deaths

FRANK G. CROWELL, Rochelle, Ill.; Rush Medical College, Chicago, 1889; a Fellow A. M. A.; aged 62; died, August 7, of heart disease.

CHARLES DAVIS, Alton, Ill.; St. Louis Medical College, 1861; Civil War veteran; aged 86; died, August 12.

CHRISTIAN C. HAXEL, Fowler, Ill.; St. Louis Hygienic College of Physicians and Surgeons, 1891; member of the Illinois State Medical Society; aged 58; died, August 23, of carcinoma.

JOHN HERBERT FRANKLIN, Spring Valley, Ill.; Rush Medical College, Chicago, 1892; a Fellow A. M. A.; member of the Western Surgical Association; on the staff of St. Margaret's Hospital; aged 58; died suddenly, August 27.

OLIVER PERRY GRANT, Easton, Ill.; Northwestern University Medical School, Chicago, 1905; aged 48; died, Sept. 17, of cerebral hemorrhage.

JOHN M. HADDEN, Seymour, Ill., (licensed, Illinois, 1878); Civil War veteran; aged 84; died, September 5, at the Lakeview Hospital, Danville, of septicemia.

HARRY DOUGLAS HULL, Crystal Lake, Ill.; Rush Medical College, Chicago, 1891; member of the Illinois State Medical Society; formerly city physician and mayor; served during the World War; aged 59; died, August 2, of heart disease.

FRANCIS L. INGRAM, Stewardson, Ill. (Licensed, Illinois, 1878; aged 90; died, August 10, at the home of his son in St. Louis.

RICHARD HOMER MEAD, Augusta, Ill.; College of Physicians and Surgeons, Keokuk, 1867; member of the Illinois State Medical Society; Civil War veteran; formerly a druggist; aged 79; died, August 30, of carcinoma.

NOAH D. MEYERS, Decatur, Ill.; Medical College of Ohio, Cincinnati, 1872; member of the Illinois State Medical Society; aged 83; died, August 5, of senility.

ALBERT HORTON PETERSON, Chicago; Keokuk Medical College, 1901; member of the Illinois State Medical Society; aged 50; died in July.

THEODORE J. PETERSON, Chicago; Dearborn Medical College, Chicago, 1905; a Fellow A. M. A.; aged 69; died, July 1, of chronic myocarditis and endocarditis.

JAMES WILEY PETTIT, Ottawa, Ill.; Louisville (Ky.) Medical College, 1873; Rush Medical College, Chicago, 1884; a Fellow A. M. A.; founder and medical director of the Ottawa Tuberculosis Sanatorium; past president of the Illinois State Medical Society; for several years president of the Illinois Tuberculosis Association, and a director of the National Tuberculosis Association; member of the House of Delegates of the American Medical Association, 1909, serving on the Reference Committee on Reports of Officers; Civil War veteran; aged 78; died, September 3, at the Illinois Valley Hospital, of cerebral hemorrhage.

HEMAN SPALDING, Chicago, Ill.; Northwestern University Medical School, 1881; a Fellow, A. M. A.; a Fellow, American Public Health Association; with the Chicago Department of Health since 1889, first as medical inspector; chief medical inspector, 1899; chief medical officer, bureau of medical inspection, 1907; chief, bureau of medical inspection, 1910; chief, bureau of communicable diseases, 1923-1926; a recognized expert in the diagnosis and control of smallpox; some time assistant clinical professor of medicine (extra mural), Rush Medical College; aged 74; died, September 22, of chronic myocarditis.

Prudens C. Sterck, Moline, Ill.; Catholic University, Louvain, Belgium, 1895; aged 54; died, September 8, of cerebral hemorrhage.

GEORGE W. MILLER, Wodson, Ill.; Missouri Medical College, St. Louis, 1871; also a minister; aged 84, died, August 11, at the home of his niece in Scottsville.

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SEVENTY-SEVENTH ANNUAL MEETING AT MOLINE, MAY 31, JUNE 1 and 2, 1927

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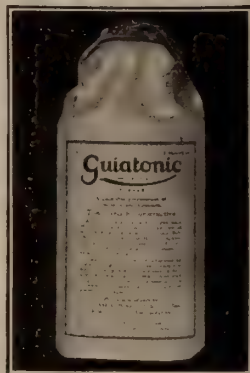
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Editorial

SUPREME COURT UPHOLDS AMERICAN DRUGS

A decision of the highest importance to every physician, pharmacist, drug manufacturer and, in fact, every user of drugs in the United States was rendered by the Supreme Court of the United States on October 11, 1926, when this highest tribunal of the nation declared that the Chemical Foundation has been acting legally and properly in the purchase of the foreign drug and chemical patents, during the war, and licensing American manufacturers to produce these essential substances in this country.

The sale of the German patents to the Chemical Foundation took place during President Wilson's administration and had, without doubt, a distinct influence upon the outcome of the war, because this transfer permitted American concerns to begin at once the production of various drugs and chemicals which had, theretofore, been made only in Germany, and whose importation ceased with our entry into the war.

President Harding, apparently laboring under some misapprehension as to the purposes and functions of the Chemical Foundation, directed that the suit be brought by the Government to set aside the sale of these patents to the Foundation.

The case was first tried in the Federal District Court of Wilmington, Del., and resulted, after weeks of evidence taking, in a finding against the Government on all points.

The case was appealed to the Circuit Court, which upheld the decision of the District Court in every particular.

A final appeal carried the question to the Supreme Court of the United States, where evidence was heard more than a year ago. The long delay in rendering a decision has afforded time for mature consideration. The Court has decided unanimously that the sale to the Chemical Foundation was valid and legal and that

the Foundation has made no improper use of the powers which it thus acquired.

This decision is a momentous one for everyone who has anything to do with drugs and chemicals in any way whatever.

To the physician it means that he will have a steady and regular supply of reliable drugs, of American manufacturers, which can never again be upset or cut off by the vicissitudes of war. The same considerations apply to the pharmacists. Among the vitally necessary drugs affected may be mentioned the arsphenamines, cinchophen, barbital, the flavines, procaine and a host of others.

To the drug manufacturer, who has invested thousands of dollars in apparatus for the manufacture of drugs and chemicals under the Foundation's licenses, it means relief from a certain degree of anxiety (though the outcome of the case could scarcely have been in doubt) and a tremendous inspiration to further investigations looking to the production of more and better drugs and chemicals for America.

To the nation at large, it means that reliable medicines will continue to be sold at reasonable prices; and, more or less indirectly, that the dye industry of America which is now in a flourishing condition, thanks to the Chemical Foundation, will be available for government uses should we become involved in another war.

Nor are medicine and pharmacy the only lines of endeavor affected by this momentous decision. The steel and packing industry and many others will be vastly benefited by the freedom of chemical investigation and activity which is now assured them.

MEDICAL AND DENTAL ARTS CLUB OF CHICAGO*

Members of the Chicago Medical Society.

Ladies and Gentlemen:

Since I came to this banquet room, I have been requested by the Toastmaster to speak to you briefly concerning the Medical and Dental Arts Club of Chicago. This I am glad to do because I believe the organization and purposes of the Club, which I feel is now assured of completion, are factors marking the most signal advance made by the medical and dental professions of the city since the organization of the Chicago Medical and Chicago Dental Societies.

In presenting me the Toastmaster made a misstatement; he said that the present outlook for the successful completion of the Club was due to my interest in it. The fact is that the medical and dental professions of Chicago owe to the physicians and dentists—Drs. John S. Nagle, Jeremiah H. Walsh, C. N. Johnson, John H. Cadmus and others—a debt of gratitude for the conception of this splendid undertaking. All honor, therefore, to these men who come to us with a proposition to join with them in the completion of an institution which will be of great benefit to the medical and dental professions and to the public of Chicago.

I am frank to say to you that I was not in sympathy with the plans presented two years ago for the organization of a resident club for the medical and dental professions to be located on the near north side. These founders of the Club were wide awake and industrious and finally selected a site and secured the necessary plot of ground by purchase and rental at the southeast corner of Wabash Avenue and Lake Street, which is ideal in location and environment for the purposes of the Club. Since its purchase in February, 1926, the value of this plot of ground has increased largely.

Early in June of this year at the request of the Board of Governors I investigated the organization and its plans and satisfied myself in conferences with the Board of Governors, with the attorneys, the architects and contractors of the Club that the financial plans were sound and that the building would be erected and ready for use on or about May 1, 1927.

I need not mention the financial arrangements of the Club because they have been placed in print and are available for each of you to study if you so desire. In other printed leaflets the plan of organization and an account of the character of the building and its purposes are fully described.

It may be said, however, that the twenty-three story building will provide an auditorium in the form of an amphitheater seating one thousand or more people and the plans provide ample space for smaller auditoriums on the two floors adjoining the large amphitheater. This will provide meeting places for the large general societies of both the medical and dental professions and smaller rooms where special societies can hold their meetings.

The upper two floors of the building will be

*Statement made by Dr. Frank Billings at the Annual Banquet of the Chicago Medical Society, on Wednesday, October 13, 1926.

devoted to a day club with kitchen and dining rooms so planned that a banquet can be given to seat five hundred people and dinners, lunches, etc., given to smaller groups when desired. The club rooms provide a patio and lounge room, smoking room, rest room, a reading room for current medical and dental literature and other desirable features usually found in a day club. The club rooms will be available for the members and for their families and friends. Preceding the meetings of the general and special societies, dinners may be given at the Club. Of the financial situation a word may be said to this effect: In the plans made for the Club, the Governors entered into a contract with Strauss & Co. who issued the bonds, and with banks, to secure approximately \$750,000 in cash from memberships in the Club and to be effective on or before May 1, 1927. To this end life memberships are \$1,500, associate memberships \$500 and annual memberships \$250. Life memberships are free from the payment of dues; associate memberships are free from the payment of dues for five years, and annual memberships will pay annual nominal dues, probably \$60 or \$75 a year.

The founders have fulfilled this cash obligation in part and to me it is astonishing that they have been able in a short period of time to secure memberships which total in cash approximately \$500,000. Now that the Club has advanced to this mile post which means success in the venture, it leaves approximately \$240,000 more to be secured by the sale of additional memberships. Surely there should be no difficulty in securing the necessary and even a larger number of memberships than will be required to complete this financial obligation of the Board of Governors.

Another thing, as soon as this membership drive shall have been completed, the attorneys have been requested and have agreed that it will be feasible to reincorporate the Club as a stock company under the laws of Illinois. The members have approved of this plan. Then each member will receive shares of stock in the Club to the full amount of the money he has paid in for a membership. When that shall have been done the affairs of the Club as to the management of its property will be carried on by a board of governors and other officers elected by

the stockholders. The financial arrangements of the Club are so sound that it is my belief based on the opinions of real estate men and others, that the bond issues will be paid off in the time stipulated which will leave the stockholders complete owners of a five-million dollar plant. Therefore, the membership in the Club and the stock which will be issued to each member will be a very valuable asset paying annual dividends.

However, I wish to state that while I have confidence in the investment of the Club membership, it is not for that reason that I have become a life member after investigating the conditions of the Club. Primarily and I may say solely, I am interested in the proposition as affording the first and only feasible opportunity for the medical and dental professions of Cook County to secure and own a home. The Chicago Medical Society has a membership of more than 4,000 and the Chicago Dental Society also a very large membership. And yet up to the present time, in this community of 3,300,000 souls, we have not had a home or a place where we could hold our meetings. This home will be for us all; for the Chicago Medical and the Chicago Dental Societies and for all of the special societies of Chicago. It will be of great influence in uniting the members of the medical profession and of uniting the members of the dental profession and will also secure cordial cooperation between the two professions.

I am glad to say that I am working in the ranks and under the direction of the Board of Governors for the successful completion of this splendid conception of a few men of the medical and dental profession. I feel that you, yes, all of us, are obligated to come into this organization and help to complete it.

SENATOR JAMES REED FOR PRESIDENT

Speaking emphatically, and yet by comparisons, nothing better could happen to this country than to have Senator James Reed of Missouri elected to the presidency.

And that, too, regardless of "party brand."

Senator Reed is fearless. Courage of his convictions belong to "Jim" Reed. He stands in herculean contrast to modern and pussy-footing politicians, afraid of their own shadows and cordial beyond belief to the jest of "Vanity, vanity, all is vanity." A little suave salve goes

further with that variety than a whitehouse filled with good simon-pure American principles.

These are the Judas Iscariots who in private express firm and damnatory convictions against mercenary and menacing policies and for constructive plans, and yet in the house or in the senate vote against these privately confided views and for those things that will put the right to the death.

As an example thereof, regard the maternity legislation polluting the books of the land. Hark back to what happened when the original maternity bill came up before Congress.

The Illinois State Medical Society, through its president, Dr. Charles E. Humiston, appeared before a committee on interstate and foreign commerce of the house of representatives. Members of this committee coached Dr. Humiston as to the arguments to be used in opposing the bill. The majority of the members of this committee were against this bill. Yet the bill was reported out formally by the said committee.

A prominent woman acquaintance of ours privately interviewed members of the house and the senate relative to the bill and her poll showed ninety-five per cent (95%) against the sentiment of the bill, and yet the bill was passed by a large majority in both house and senate. Here is a beautiful example of hypocrisy personified. Senator Reed was not one of those. He opposes openly all forms of deceptive, sentimental legislation and sticks by his opposition. He is a rock rather than a shifting crocodile.

BEHAVIOR RESEARCH FUND

Dr. Herman M. Adler, Director of the Institute for Juvenile Research, announces the following appointments to the Behavior Research Staff, made possible by the Behavior Research Fund which has been provided by public subscription for a period of five years through the efforts of the Friends of the Institute for Juvenile Research:

Herman M. Adler, M. D., director; Horace Gray, M. D., of Boston, Mass., Endocrinologist; Prof. Gustav A. Jaederholm, Ph.D., of the University of Gothenburg, Sweden, Research Psychologist; Ethel Kavin, M. A., Research Psychologist; Prof. K. S. Lashley, Ph.D., of the University of Minnesota, Research Psychologist (Comparative Psychology); Prof. L. L. Thurstone, Ph.D., of the University of Chicago, Re-

search Psychologist; Claude Shaw, Ph.D., of the University of Chicago, Research Sociologist; and John C. Weigel, Administrator.

"The scientific study of human behavior," said Dr. Adler in making the announcement, "must and will yield not only new methods both for the treatment and prevention of delinquency and crime, but will also produce new knowledge about the human mind that will add to the sum total of human happiness."

For further information call John C. Weigel, administrator, The Institute for Juvenile Research, 907 South Lincoln Street, Chicago, Seeley 1241.

THE SHEPPARD-TOWNER ACT AND ENCROACHMENT UPON STATE RIGHTS IN HEALTH MATTERS STATE AID THE FEDERAL CONTROL OF EDUCATION

WASHINGTON BUREAUCRATS CLOTHED WITH
LEGISLATIVE, EXECUTIVE AND JUDICIAL
POWERS

State Aid propagandists have not been content with the octopus-like growth of their pet. Encroachments upon state rights in health matters and numerous other activities are insufficient for their unsatisfied appetite. They are now out after federal control of education; the primary object of the Sheppard-Towner Maternity Bill was for federal control of medicine and the care of the sick.

The leading Constitutional lawyers of the country are all alert to the dangers of over-centralization of power at Washington. The ILLINOIS MEDICAL JOURNAL was the first to call the attention of the physicians and public to this rapidly growing menace. The system is now being condemned by most of the leading educators and practically all the country's statesmen. In no phase of human endeavor is the menace more dangerous than when applied to the care and supervision of the health and welfare of the people.

With the Hon. Edward P. Buford, President of the Virginia Bar Association, we believe:

That the concentration of power in Washington through the multiplication of the administrative bureaus under a perverted interpretation of the general welfare clause, is the most far-reaching and dangerous of modern legislative tendencies.

The Sheppard-Towner Maternity Act, and the Curtis-Reed Bill (Educational Bill S. 291—H. R. 5000) now pending in Congress are conspicuous illustrations of this method of federal usurpation.

If measures of this character are legitimate exercises of federal power, there is no limit to the possibility of federal exploitation. Every conceivable form of governmental activity may be subsidized by federal taxation, medicine included, and the number of federal office holders be indefinitely increased. To illustrate the latter point, we call your attention to the fact that there are 2,700,000 employees on the payroll of the Federal and Local Governments of the United States, and 700,000 former employees drawing pensions. In 1860 one person in every thousand population was on the public payroll; in 1895 the ratio had increased to one in one hundred, and today, every group of 11 citizens are supporting one person on the public payroll.

Under the practice now prevailing, new bureaus are created and the power of legislation is delegated to them. They are given authority to write the laws they are to administer and to change them at pleasure. In other words, they are clothed with full legislative and executive powers and to some extent with judicial powers. In other words, these bureau heads are judge, jury and prosecuting attorney, all the powers being delegated to the one person.

WHO IS MME. KOLLONTAI? SHEPPARD-TOWNER MATERNITY LEGISLATION, THE CHILDREN'S BUREAU AT WASHINGTON

THE SPREADING OF BOLSHIEVISTS' PROPAGANDA

NOTE: The following is reproduced in response to numerous requests from physicians and organizations throughout the country asking for data on Sheppard-Towner legislation.

The article is of special importance to physicians. Medicine being the line of least resistance is first in their attempt to be socialized. Once the practice of medicine is controlled by soviet government bugs and the home is made accessible to dream book artists, smelling committees, efficient medical service for the public is gone forever. The American public have a right to know who is Mme. Kollontai so highly praised

by the United States Children's Bureau publication.

In the first place, Mme. Kollontai. Her first name is Alexandra. Congressman Layton, commenting recently, remarked that "The Sheppard-Towner Maternity Act may be traced to the Children's Bureau, created in 1913, chiefly through the propaganda of *Madame Kollontai, a Bolshevik, now enjoying the connumbial bliss of an eighth husband.*"

Of the Kollontai portfolio the ultimate of the ethics and economics is abolition of the marriage bond; the advocacy of promiscuity as a relief from prostitution; the elimination of the badge of honor to children born in wedlock and the limitation of the population by birth control as a war prevention process; the feminists' plan of directly removing the legal discrimination of women by their refusal to bear children, save when, where and how they will; with ready relief for quick conception and libido, free and unconfined.

As portraying the numerous activities and doctrines promulgated by Mme. Kollontai we quote *The Woman Patriot* as follows:

Alexandra Kollontai, head of Russia's Maternity System under the Czar; author of "the most comprehensive study of maternity benefits and insurance in any language" according to the United States Children's Bureau publication, "Maternity Benefit Systems in Certain Foreign Countries" (page 175); who is now Bolshevik Commissar of Public Welfare, will occupy a place in history second only to that of Judas when the uncensored historian of the future investigates the Russian Revolution. Hundreds of books have been published on Bolshevism. Practically all *dodge* Alexandra Kollontai. A recent book on Russia prints a full page picture of Kollontai—without a word about her except her name and office. Why? *Is it because Alexandra Kollontai's activities, if fully revealed to the world, would discredit Feminism everywhere and prove it a greater menace to both the family and the State than any other form of Socialism?*

The Kollontai material would fill a volume. She is undoubtedly "the most comprehensive" *revolutionist in the world*. Without her, Russia might have crushed Germany, in 1917. Under Order No. 7433 of the German Imperial Bank, dated March 2, 1917, Kollontai "was authorized to draw money from all German banks in Sweden for the purpose of peace propaganda in Russia." (The German-Bolshevik Conspiracy, U. S. Public Document, No. 20, October, 1918, Documents No. 1 and 7.)

KOLLONTAI TWICE IN AMERICA

This same Kollontai made *two tours of America*, speaking in German groups, the first from November, 1915, to June, 1916; the second from December, 1916, to February, 1917. She ranged at large from New York to San Francisco, speaking in the great industrial centers, undisturbed by the Attorney General's office, and unnoticed save in the German press.

To cover her tracks, Kollontai was then posing as a protector of maternity and infancy, *which enabled her to gather vital statistics during war time that no other*

German spy could obtain. In 1916, she produced a book on the subject, which the *United States Children's Bureau* called "the most comprehensive study of maternity benefits and insurance in any language." (Maternity Benefit Systems in Foreign Countries, p. 175.)

PROVED GERMAN AGENT

Kollontai returned to Russia early in 1917, a month before Lenin arrived, was placed on the German payroll, and "authorized to draw money from all German banks in Sweden for the purpose of peace propaganda in Russia" under Order No. 7433, of the German Imperial Bank, dated March 2, 1917—just a week before the revolution burst with "the women's day." (German-Bolshevik Conspiracy, U. S. Document No. 20, October, 1918, Documents 1 and 7.)

On October 31, 1917, a week before the November Revolution, Kollontai was placed at the head of the Commissariat of Social Welfare, with charge of children's homes, mothers and infants, hospitals, nurses, social insurance, disabled veterans and rationing of the families of the Red Army. (See Kollontai's article, front page, *Soviet Russia*, August, 16, 1919.)

A week later, November 6, Kerensky, the weakling, reviewed the Women's Battalion of Death (5 companies, 200 in all, "who had never yet fired a shot from their rifles") while the Bolsheviks quietly took over Petrograd. (N. Y. Times Current History, December, 1917, p. 423, and February, 1918, p. 302.)

A MURDERESS CANDIDATE FOR PRESIDENT

After the November revolution, the next campaign of the Bolshevik was to capture the Constituent Assembly, which met January 12-17, 1918. The first move the Bolsheviks made in the convention was the attempt to elect a woman murderess (Maria Spiridonova) President of Russia. The attempt failing, they seized power by force of arms, and elected a "Central Executive Committee" on which the German General Staff insisted that they place Kollontai. (Document No. 7, page 8, German-Bolshevik Conspiracy. (See also Current History, August, 1918, p. 270.)

Kollontai is now with Schliapnikoff, former Commissar of Labor, now head of the Communist-Labor Party and the metal workers group—the anarcho-syndicalists or "Left Wing" of the Bolsheviks. Even Lenin and Trotzky are too "conservative" for Kollontai, whose book, "Communism and the Family"—the most ruthless attack on the family since Engels—is now being circulated wholesale in America by the most radical "Reds."

WOMEN AND THE RUSSIAN REVOLUTION

Let Mme. Kollontai herself speak:

"It was the working women who in Russia as well as in France started the revolution. The Russian revolution in March, 1917, really started with the 'woman's day' proclaimed for the 9th of March by the Socialist Party. The women demonstrated against the high cost of living and demanded bread. This

day marked the beginning of the revolution. When the March revolution fully developed it was natural that the women should take part in it by the side of the men. Then Kerensky and Chauvinism came into power. But the women kept their heads cool. The first great demonstration or protest meeting against the military offensive [observe that Russian armies were ready to advance in the spring of 1917], marked by a distinctly internationalistic character was held by working-class women on the 9th of June, under the leadership of the editorial staff of the organ of the working women's organizations. Shortly before, we had a mighty strike among the women workers in the big laundries. * * * It was the first strike after the March revolution."

The above statement is taken from *Soviet Russia*, official organ of the Russian Soviet Government Bureau, August 23, 1919, front page, being an interview with Mme. Kollontai by Arvid Hansen, Norwegian Socialist. The same article, with the first paragraph deleted, appeared three weeks later in *The Suffragist*, official organ of the the National Woman's Party, September 13, 1919.

Now let us have other testimony on the "mighty strike among women workers."

"At Moscow the Nicholas Orphan Asylum attendants went on strike and closed the kitchens, forbidding anyone to prepare food for the children. At the Elizabeth Hospital, workers who care for the sick refused to return to their duties except upon transfer of executive power to the Soviet." (Ludovic Nandau, Current History, February, 1918, p. 295.)

Is it any wonder that Von Hertling, Imperial German Chancellor (November 29, 1917), included in his "peace terms" for the to-be conquered countries the adoption of "compulsory health insurance" including a maternity system? Compulsory health insurance and maternity benefits were first adopted by Germany in 1883, the demands of Socialists for State support of women and children corresponding with Bismarck's design to create a supervised and standardized nation from the cradle to the firing line.

NATIONALIZATION OF WOMEN

Shortly after Von Hertling's speech, the Socialist British Labor Party came out also for sex equality, nationalization, health insurance, maternity benefits, etc., on January 3, 1918. (Current History, February, 1918, p. 204.)

A few months later, April, 1918—but let Kollontai tell it:

"In April, 1918, a woman's conference was held, representing the city and the province of Moscow, which was widely attended. The Congress in Petrograd adopted important resolutions regarding maternity and unemployment insurance. At the Moscow Congress, the food question, the cost of living, and children's welfare were the great burning questions." (*Soviet Russia*, August 23, 1919.)

Thus it appears that Kollontai arranged such a conference (although Russia had maternity benefits, medical care, funeral benefits, etc., under the Czar).

only a few months before the United States Children's Bureau called together a conference of foreign and domestic theorists (including a few "nuts" as Senator Kenyon admits), on "Child Welfare Standards" which provide for enough employes "*to see that every infant is referred to an infant-welfare center.*" (Standards of Child Welfare, issued by Children's Bureau, p. 436.)

How was it possible for Germany to wreck Russia with the help of women and the head of Russia's Maternity System? Let us hear *Colonel Raymond Robins*, the first American who ever agreed to co-operate with Trotsky and Lenin:

"I paid particular attention to the radical situation, because I did not have any too much time, and spent it where *most useful*. The German method in handling the radical situation was to find usually *some woman*—it happened in so many cases that it seemed that that was the general rule, *to use a woman.* * * * Then this person would call a meeting of a circle of revolutionists in her home between midnight and 4 o'clock in the morning * * * and this woman, after some impassioned appeal, * * * would break into tears and would say, 'What can I do for poor Russia?' She could not do anything but give money to the revolutionists; and so she gave money. They felt that this was a converted Russian who was now turning toward revolutionary propaganda, but they were really using German money. That was the method by which they ran the show." (Bolshevik Propaganda, U. S. Document, p. 792.)

When Mr. Robin was asked by Senator Nelson if there was a kinship and resemblance between the I. W. W. and the Bolshevik doctrines, Mr. Robins replied:

In some of the doctrines, yes, sir; undoubtedly so. But Senator, if we meet by a real intelligent reconstruction policy these left-over spots, and take from the workman's table the spectre that I as a workman knew, the fear of unemployment, accident and sickness, which can be protected by intelligent systems of pensions and insurance, and safeguard old age and premature death—if these three fears are banished from the workingman's table—we will have laborers and their families implicated in the security and permanence of the Government, because the Government is backing him at these points."

MATERNITY AID SOUNDS WELL

Paternalism, health insurance, etc., Government maternity aid, *sound well*, but let us hear the testimony of *Kollontai* herself as to their real objectives:

"In the family such as we have become accustomed to it, it is the husband who earns, and supports wife and children. * * * What was it that made the family strong in the days of old? In the *first place*; the fact that it was the husband and *father who supported the family*; in the second place, that the home was a thing equally necessary to all the members of the family, and in the third place, that the children were *brought up by the parents.* * * *

"The individual household has passed its zenith. It

is being replaced more and more by collective house-keeping. The working woman will sooner or later need to take care of her own dwelling no longer; in the Communist society of tomorrow this work will be carried on by a special category of working women who will do nothing else. * * *

BRINGING UP CHILDREN IS THE AFFAIR OF THE STATE

Here also the state of the working comrades will come to the rescue of the family *by substituting for the family*; society will gradually take charge of *all that formerly was on parents.* * * * As the domestic labors of the family die out one by one, *all obligations* of support and training will be filled by society *in place of the parents.* * * * The child will be fed, it will be brought up, it will be educated by the cares of the *Communist Fatherland.* * * *

"This old type of family has seen its day. * * * The family is ceasing to be a necessity to the State, as it was in the past; on the contrary, it is *worse than useless*, since it needlessly holds back the female workers from a mere productive and far more serious work. * * * The woman in the Communist city no longer depends on her husband but on her work. * * * Marriage is henceforth to be transferred into a sublime union of two souls in love with each other. * * * *This free union* * * * instead of the conjugal slavery of the past—that is what the Communist Society of tomorrow offers to both men and women.

"There will be no more room for such petty divisions as were formerly understood: 'These are my own children; to them I owe all my maternal solicitude, all my affection; those are your children, my neighbor's children; I am not concerned with them I have enough to do with my own.' Henceforth the worker-mother, who is conscious of her social function, will rise to the point where she *no longer differentiates between yours and mine*; she must remember that there are henceforth only *our children*, those of the *Communist State*, the common possession of all the workers.

A NEW RELATION BETWEEN THE SEXES

"The workers' State has need of a new form of relation between the sexes. The narrow and exclusive affection of the *mother for her own children* must expand until it embraces *all the children* of the great proletarian family. In place of the indissoluble marriage based on the servitude of woman, we shall see rise the *free union.* * * * In place of the *individual* and egotistic family, there will arise a great *universal* family of workers, in which all workers, men and women, will be, above all, brothers and comrades. * * * This new relation will assure to humanity the joys of the so-called *free love* enobled by a true social equality of the mates, joys which were unknown to the commercial society of the capitalist regime.

"Henceforth, divorce may be amicably obtained within a period of a week or two at most." (The Family of the Communist State, By Alexandra Kollontai,

in Soviet Russia, official Bolshevik organ, December 13, 1919.)

This is the Bolshevik-Feminist who is called the author of the "most comprehensive" maternity system in the Children's Bureau booklet, "Maternity Benefit Systems in Certain Foreign Countries." The article from which the quotations are made is very long, and contains many other equally extreme doctrines. Another series of articles by Kollontai in Soviet Russia, August and September, 1921, contains the following, among certain other sentiments that are unfit to print in a decent paper:

IDLE WIFE ON FOOTING WITH THE PROSTITUTE

"All women who desert from labor, who take no part in the obligatory work, and who are not performing any work for small children at home, are placed on an equal footing with the prostitute—they must be forced to work. And we cannot make any distinction here between the prostitute and the most lawful wife who lives on her husband's sustenance, whoever her husband may be, even though he be a 'commissar.' In other words, we are going to introduce equal treatment for all deserters from labor. From the standpoint of the workers' collective, a woman is to be condemned, not for selling her body, but for the fact that, just like a legally married idle woman, she does no useful work for the collective, this new, absolutely new, procedure with prostitution is dictated by the interest of the workers collective."

FREE LOVE AND COMMUNISM

Kollontai's objectives are free love and communism, but her arguments, that when the State substitutes for the father the family is doomed, are unanswerable "Maternity systems" whether they involve the blanket term, "care of maternity and infancy in the several States" by a Children's Bureau, providing that such "care" as it may require "shall be available for all residents of the State" as in the Sheppard-Towner Bill; or whether they involve the conscious, revolutionary, communist plots of a Madame Kollontai, all are based on the fatal principle of State substitution for the father and challenge the future existence of the family.

The primal function of the family is to guarantee mother and child the support of recognized husband and father.

STATE TO TAKE OVER FUNCTION OF THE PARENTS

The Kollontai doctrine, that the State should take over all the functions of the father but the biological, would reduce men to the social level of tomcats and would wipe out for women and children all that distinguishes the human family from the animal herd.

The best "public protection of maternity and infancy" is the solemn vow of an honest man at the marriage altar. The only substitute (State care of mothers and children) involves, whether its advocates know it or not, the most revolting of all Socialist doctrines.

CHILDREN STARVING IN RUSSIA

Socialism's first victory in legislation was the adoption of compulsory health insurance and maternity benefits in Germany in 1883. It was not until 1911 that Socialists succeeded in getting any other country to adopt them. They wrecked Russia's army. They established Bolshevism. They starved Russian orphans with a *hospital strike* in 1917. Children are still starving there today.

Describing starving Russia S. B. Conger, in a dispatch from Riga to the *Philadelphia Public Ledger*, August 7, 1921, wrote:

"One of the greatest features is the abandonment of children by their parents, who are without food themselves and who have been accustomed under the bolshevist regime to see the responsibility for children taken over by the government." More than 300,000 children in the Province of Samara alone have been thus abandoned.

SOCIAL WELFARE, MOTHERHOOD ARE CAMOUFLAGE

That such phrases mean less than nothing as used by Communists, is demonstrated by the fact that it was with a "Bureau of Social Welfare," and a so-called "Palace of Motherhood" and a program that she called "a Heaven on Earth," that Alexandra Kollontai brought about what Sir Paul Dukes, the greatest outside authority on Russia says, that the central tragedy of Russia today is the result of Bolshevik corruption of children under Madame Kollontai's "welfare" and "maternity" system.

Sir Paul Dukes adds: "It has always been a bolshevist principle to fight the institution of the family. Mme. Kollontai's writings can leave no doubt on that score, even in the minds of the skeptical. The idea is to remove children at an early age from parental care and bring them up in colonies." (N. Y. Times, July 17, 1921.)

NATIONALIZATION OF CHILDREN

Prof. Boris Sokoloff, a leading Russian Socialist, and one of the members of the first All Russian Constituent Assembly that the Bolsheviks broke up by force, January 18, 1918, wrote in *Viola Russii* (Will of Russia), February 16, 1921:

"I am prepared to forgive the Bolsheviks many things almost everything; but one thing there is which I can not and will not forgive them, namely, those experiments, positively criminal and worthy of the most savage tribes of the African jungle, which the Bolsheviks have been making all this time with our young generation, with our children! This crime knows no parallel in the history of the world. They have destroyed morally as well as physically a whole Russian generation."

Professor Sokoloff, in the same article, quoted the following statement by Mme. Lelina (Commissar of Social Welfare in the Northern Commune, Petrograd, and wife of Zinoviev, president of the Third International), in the official journal of the Soviet Commissariat of Public Education, No. 4:

"We must nationalize the children. We must remove the children from the pernicious influence of the family. We must register the children; or—let us speak plainly—we must nationalize them. Thus they will from the very start remain under the beneficial influence of communist kindergartens and schools. Here they will grow up to be real communists. To compel the mother to surrender her child to us, to Soviet State, that is the practical task before us."

Madame Kollontai herself, who, it must be remembered, was indorsed by the United States Children's Bureau booklet (No. 57, p. 175), as the author of *"the most comprehensive study of maternity benefits and insurance in any language,"* writes in her pamphlet, "Communism and the Family" which the Workers' Party (successor to the Communist Party of America) is distributing wholesale in America now:

*"Henceforth the worker-mother, who is conscious of her social function, will rise to a point where she no longer differentiates between yours and mine; she must remember that there are henceforth only our children, those of the Communist State, the common possession of all workers. * * * In place of the individual and egotistic family, there will arise the great universal family of workers, in which all the workers, men and women, will be, above all, workers, comrades. Such will be the relation between men and women in the Communist society of tomorrow. This new relation will assure to humanity all the joys of the so-called free lover * * * joys which were unknown to the commercial society of the capitalist regime. * * * The red flag of the social revolution which will shelter, after Russia, other countries of the world also, already proclaims to us the approach of the heaven on earth to which humanity has been aspiring for centuries."*

WOMEN AND CHILDREN WARDS OF COMMUNISM

The Overman Committee of the Senate, after investigating Bolshevik Propaganda thoroughly at great length, declared in its report:

*"The apparent purpose of the Bolshevik government is to make the Russian citizen, and especially the women and children, the wards and dependents of that government. Not satisfied with the degree of dependency incurred by the economic and industrial control assumed by its functionaries, it has destroyed the natural ambition and made impossible of accomplishment the moral obligation of the father to provide, care for, and adequately protect the child of his blood and the mother of that child against the misfortunes of orphanhood and widowhood. To accomplish this, it has by decree expressly abolished and prohibited all right of inheritance, either by law or will. Upon death all of the decedent's estate is confiscated by the State. * * * They have promulgated decrees relating to marriage and divorce which practically establishes a state of free love. Their effect has been to furnish a vehicle for the legalization of prostitution by permitting the annulment of the marriage bonds*

at the whim of the parties. (Senate Document No. 61, 66th Cong., 1st Session, pp. 36-37.)

Kollontai, in her "Communism and the Family," said:

*"What was it that made the family strong in the days of old? In the first place, the fact that it was the husband and father who supported the family; in the second place, that the home was a thing equally necessary to all members of the family; and in the third and last place, that the children were brought up by the parents. * * * Under the capitalist regime, the children were frequently, too frequently, a heavy and unbearable burden to the proletarian family. Here also the Communist society will come to the aid of the parents. In Soviet Russia, owing to the care of the Commissariats of Public Education and of Social Welfare * * * there are homes for very small babies, day nurseries, kindergartens, children's colonies and homes, infirmaries, health resorts, restaurants, free lunches * * * does all this not sufficiently show that the child is passing out of the confines of the family and being placed from the shoulders of the parents on those of collectivity? * * * A subsistence ration and solicitous care are assured to the child and to the mother by the Communist Society, by the Workers' State, as soon as the child arrives in the world. The child will be fed, it will be educated by the care of the Communist Fatherland. * * * The family is ceasing to be a necessity of the State, as it was in the past; on the contrary, it is worse than useless, since it needlessly holds back the female worker from a more productive and far more serious work. * * * No more inequality within the family! No more domestic servitude for women! The woman in the Communist city no longer depends on her husband but on her work. It is not her husband but her robust arms which will support her. There will be no more anxiety as to the fate of her children. The State of the Workers' will assume responsibility for these!"*

MADAME KOLLONTAI IN MEXICO

The Russian Soviet government, so the dispatches tell us has appointed Mme. Kollontai as its representative in Mexico.

Gold help Mexico! This apostle of free love and crazed domestic doctrines goes into a land where the home has always been sacred and the relationship of parents and children, the god of the family, worshipped both by tribal Indians clinging to their own gods and the Christianized of the people. Morality has had as sharp a note as the blades of the sword-like yucca and the spines of the cactus.

True, Mexico is a land of women worn and broken by poverty and childbearing, but even so, this land of great extremes of wealth and poverty, the crowding old and the striving new,

is not in half so sad a state as shackled Russia. No peon is half so much to be pitied as the godless little lads and girls of the new Russia, from which land comes the news of the homeless children worse off than animals that crowd refuges. These children have not even the inhibitions of the beasts of the field to restrain them and there are thousands of them diseased sexually both in mind and in body, unless dispatches that have been printed in daily papers deliberately falsify.

Well, the Kollontai may be the new Mme. Messiah to bear the torch of awakening to Mexico. From an humanitarian standpoint one may be excused for remarking that if Mexico is onto its job of patriotism it would not be a bad idea to immediately fill full of pulque the Russian soviet portfolio and "let nature take its course."

AGAINST RENEWAL AND EXTENSION OF THE FEDERAL MATERNITY ACT AS PROPOSED IN THE PHIPPS- PARKER BILL.

EDITOR'S NOTE: Not only the maternity act, but the origin, object, nature, methods and leadership of the communist conspiracy for revolution in America through acts of pretending legislation for "women and children," and the "farmer" is the subject of a petition to the senate presented by the board of directors of the *Woman Patriot* of Washington, D. C. The following quotation of May 15, 1926, is illuminating:

May 17, 1926.

To the Honorable Members of the United States Senate:

Gentlemen:

The Board of Directors of The Woman Patriot Publishing Company, consisting of Mr. John Balch, Milton, Mass.; Mrs. Randolph Frothingham, Boston, Mass.; Mrs. Rufus M. Gibbs, Baltimore, Md.; Miss Mary G. Kilbreth, Southampton, N. Y.; and Mrs. B. L. Robinson, Cambridge, Mass.; is unanimously opposed to the renewal and extension of the Sheppard-Towner Maternity Act, as proposed in the pending Phipps-Parker Bill.

Having been denied a hearing by the Senate Committee on Education and Labor, and not having been heard at the hurried, inadequate

House hearings sprung within 24 hours after the introduction of the bill, we therefore respectfully submit to the honorable Members of the United States Senate, this petition for the rejection of the Phipps-Parker Bill to extend the Maternity Act, and present reasons and facts comprehensively and in detail for such action.

Your petitioners are veterans in the opposition to the Maternity Act, having fought it and the group of legislation of which it is a part, since 1920.

We compiled the first Federal Aid taxation tables on the original Sheppard-Towner Maternity and Smith-Towner Educational Bills, showing the unjust incidence on the States of that tax which asserted the right of the Federal Government to redistribute the National wealth, and to operate a nation-wide system of thefts and bribes, corrupting the States to surrender their local self-government.

We reprinted the Congressional debates of 1867-8 on the Establishment and Abolition of the short-lived, post-Civil-War Federal Department of Education, believing that remarkable legislative incident a powerful argument against repetition of that abortive experiment.

It was an officer of this Company who brought the citizen's suit in the United States Supreme Court (*Frothingham v. Mellon*, 262 U. S. 447) to test the constitutionality of the Maternity Act, which the Court dismissed, "For want of jurisdiction, without considering the merits of the constitutional questions," as the decision states.

Impressed by the gravity and obscurity of the Social and Economic issues involved in this legislation, your petitioners have examined, and now respectfully show a mass of related and indisputable facts, many of them never before presented to either House, and unknown to the public, which in brief, seem to prove beyond reasonable doubt:

That placing the health of mothers and children and control of State health authorities' plans for maternity and infancy care under a radical Federal Bureau of social workers is unscientific and unsafe for mothers and babies; that more lives of mothers and infants are lost, in the aggregate, among States accepting the Maternity Act, than among States rejecting it; that the State most subjected to these experiments has the highest rate of maternal mortality

from septicemia in the United States; and finally, that this legislation is an integral part and direct result of a comprehensive Communist Legislative Program, designed and led by the ablest legislative manager Communism has produced, to socialize and nationalize the care, control and support of American children in the central Bureau established by the same Communist leader for that purpose, at the heart of the United States Government.

As no one of these bills can be considered adequately apart from its related measures and their common background and object, we are forced to a consideration of the whole interlocked group of measures constituting a Program of Revolution by Legislation concerning women and children.

Your petitioners therefore respectfully present these facts at the length which their fair and comprehensive consideration seems to require, in the following form:

First, a Summary of General Objections to indicate the nature of the facts proposed to be sustained hereafter by documentary evidence.

Second, a Memorandum of Evidence, in detail, proving the truth of all charges contained in this petition.

SUMMARY OF GENERAL OBJECTION:

1. *The Congress and Public Tricked.*—These bills are dishonestly presented to hide their true scope and purpose. They are counterfeit legislation, organized schemes to trick the Congress and the country by pretending humanitarian, beneficent-appearing bills, masked as "Welfare" and "women's" measures, and entrusted to certain women's organizations to engineer, the better to allay public suspicion, but are none the less straight imported Communism. The Bolshevik wolf rarely gets to the doors of Congress except as a Little Red Riding Hood.

Lenin's widow, Nadeshda Krupskaya, writing in *Pravda*, official Moscow Communist organ, April 9, 1922, says:

"Our duty is to apply in practice the maxim of Vladimir Illich (Lenin): 'We must know how to build Communism with non-Communist hands.'"

Again, Lenin said:

"If Bolshevism fails, it will be because we could not get the mass of women interested." (Associated Press dispatch, Feb. 27, 1919.)

When Madame Kalenina, wife of the Soviet President, sought to enter the United States for an agitation tour in April, 1923, immediately after the execution in Russia of several clergymen for teaching religion to children, etc., the *New York Herald*, April 9, 1923, reported that:

"A committee of well-known women to aid Mme. Kalenina in her proposed tour here," included Miss Julia C. Lathrop, former Chief of the Federal Children's Bureau and Vice-President of the National League of Women Voters.

Raymond Robins, describing to a Senate Committee the German "method in handling the radical situation" to promote Bolshevism in Russia (during the Czarist and Kerensky regimes) said it was "to find usually some woman—it happened in so many cases that it seemed that that was a *general rule*, to use a woman." (Bolshevist Propaganda Hearing, U. S. Senate, 65th Congress, 3d Session, Feb.-March, 1919, p. 792). Mr. Robins' testimony was not against the Bolsheviks, but in fact so favorable that his "Own Story" (compiled chiefly from his testimony at that hearing) has since been advertised and sold as Bolshevik propaganda by the Communist Workers Party of America.

2. *Unconstitutional and Unpopular.*—The Phipps-Parker bill concerns matters over which the American people never gave their Federal Government an iota of authority. It involves the same principle of nationalized, standardized care of children and Federal interference between parent and child which the American people so sweepingly repudiated in defeating the Federal Child Labor Amendment, on which the States, acting under popular pressure, now stand 36 to 4 for rejection. Since aroused by the campaign of information waged from Massachusetts to Oregon against the Child Labor Amendment, there can be no question where the people stand on Federal interference in their homes. More oppressive invasions of the private lives of citizens have recently been proposed or attempted by the encroaching Federal power than George III would have dared to impose upon the American colonists, proving that the people may be as burdened by "multitudes of new offices" and "swarms of officers" under their own Constitution, made by themselves, when violated by their own Congress, elected by themselves, as if they had no representation at all. Citizens of Massa-

chusetts have said that they regarded the advisory referendum of 1924, against the Child Labor Amendment, as a bloodless, second Concord, "to leave their children free (in the words of Emerson's hymn) from tyrannous control by Congress. It is not to be expected that a Union of 48 great States with 110,000,000 people can be more safely robbed of their bill of rights by their own Congress than 13 weak colonies could be oppressed 150 years ago by a distant parliament. A candidate who has such expectations has learned little of the history and true spirit of his fellow-citizens. As Horace Greeley observed, "The Americans are a great people when you make them a little mad." There can be no doubt that increasing Federal encroachments in domestic and family affairs are making them a little mad.

3. *Revolutionary Conspiracy.*—The Federal Maternity Bill inextricably interlocks with the Child Labor Amendment and the Federal Children's Bureau. They constitute, with the Federal Education Department Bill, a unified *Agency and Program of Revolution by Legislation*. They are as deliberate a conspiracy to destroy this Republic as any plot ever hatched to overthrow a government by force and violence.

Including the creation of the Children's Bureau in 1912, they were all backed by the same open groups, and "underground" by the Communists, and were chiefly promoted by one woman, a Marxian Socialist, Mrs. Florence Kelley (formerly Mrs. Wischnewetzky*) pupil and translator of Friedrich Engels (co-author with Karl Marx of the Communist Manifesto) and Engels' chosen lieutenant for introducing Communism into "the flesh and blood of Americans" as he instructed her.

The Engels-Kelley program is derived straight from the fundamental Communist Manifesto of 1848, by Marx and Engels, fathers of modern Communism, as well as from current Moscow Bolshevism, which specialized on women and children. It centers about the Federal Children's Bureau as closely as the Bolshevik system for women and children, the most brutalizing doctrine of the Terror, centered about the Soviet Department of Social Welfare and Alexandra Kollontay, its first Commissar—who was indorsed by the Federal Children's Bureau as the author of "the most comprehensive study of maternity benefits and insurance that has yet

appeared in any language." (Children's Bureau Publication No. 57, *Maternity Benefit Systems in Certain Foreign Countries*, page 175.)

The Engels-Kelley program carries in its wake as logical sequence, doles for children and maternity or childbirth doles for women—"maternity benefits"—not as a help for needy mothers, but as a natural right, confirming the socialist doctrine that maternity is "a service to the state" and that all children "legal or illegal," and all mothers, married or unmarried, should be supported by public taxes instead of by individual husbands and fathers. This cattleizing, stock-farm, breeding proposition for replenishing the population, that dehumanizes marriage, and lifts responsibility for their offspring from fathers and mothers, has incalculable social and moral consequences, compared with which the mere cost, or taxation aspect of the issue, however enormous, is relatively trivial.

An examination of Children's Bureau publications will reveal so many elaborate "studies" of illegitimacy, compared with the few short pamphlets on infant and child care, that the Bureau might be considered to have a morbid interest in this subject, were it not a well-known and deliberate plan of the Socialists, set forth at length in Engels' "Origin of the Family, Private Property and the State," and August Bebel's "Woman and Socialism," to wipe out all legal, social and moral distinctions between legitimate and illegitimate children. It will be shown hereafter that both of these indecent Socialist books have been recommended by Mrs. Kelley as fundamental studies for social workers. Also, a comparative table of Children's Bureau publications along this Socialist line, as against its publication for mothers, is submitted in the attached Memorandum of Evidence.

With the inner ring of Socialists and feminists in control throughout the country, under the Federal Maternity Act, of the health centers for mothers and infants (corresponding to the "shop nuclei" in factories as agitation centers in the industrial Communist campaign), and of public schools and colleges under the proposed Education Bill, a channel of propaganda as pervasive as the circulation of the blood in the human system, the youth of the Nation would be at their mercy.

4. *National Suicide Propaganda.*—The sane, prosperous American people would never accept

Communism with their eyes open. Engels knew that when he instructed Mrs. Kelley, January 27, 1887:

"The less it (Socialism) will be knocked into the Americans from without and the more they test it by their experience. . . . the deeper it will go into their flesh and blood." (N. Y. Call, Socialist organ, Jan. 29, 1923).

Our sturdy self-reliance and energy, heritage of pioneer days, are to be sapped by humanitarian "welfare" measures, making of American citizens mere parasites of their Government, instead of its upholders. This country was settled by pioneers who came here facing danger, hardship and privation, an unknown wilderness, and ruthless savages, because they counted *freedom* from oppressive bureaucratic European governments a greater boon *than any material comfort and ease*.

Jefferson voiced what they wanted in government in his first Inaugural:

"A wise and frugal government, which shall *restrain men from injuring one another and leave them otherwise free.*"

The framers of our Constitution sought every safeguard of our liberties, but George Washington warned us:

"Resist with care the spirit of innovation upon its principles, however specious the pretexts. One method of assault may be to effect in the form of the Constitution alterations which will impair the energy of the system and thus to undermine what can not be directly overthrown." —(Farewell Address.)

Jefferson, with all his enthusiasm for our system, wrote:

"In every government on earth is some trace of human weakness, some germ of corruption and degeneracy, which cunning will discover, and wickedness insensibly open, cultivate and improve." (Notes on Virginia, 7, 390.)

The Communists and Socialists seek every opportunity that cunning can discover to use the "general welfare" clause of the Constitution, plus all the emotion and sentimentalism which modern propaganda methods can associate with the word "welfare" when coupled with women and children, "to undermine what can not be directly overthrown."

So many recent abuses have claimed the "general welfare" clause as authority that the editor of the Massachusetts Law Quarterly recently

alluded to it as "The Achilles Heel of the Constitution." And the measures which the cunning of the Communists cannot drag into Congress under a perverted interpretation of the welfare clause, or the stretching of some enumerated power until its framers would not recognize it, they PROPOSE BY CONSTITUTIONAL AMENDMENT, when the Supreme Court has held them clearly unconstitutional.

The Kelley-Engels program proposes to trick our own Representatives to legislate us into Communism, and make us dig our own graves, into which it is intended we shall fall *by our own act*.

This was the campaign policy adopted at the 1908 National Socialist Convention at Chicago, when the convention, split into two factions, fought out the problem of how best to overthrow the United States Government.

The two Socialist factions, in entire agreement on their ultimate purpose, were at odds only as to *methods* practicable in America.

One faction, the extreme, straight Marxian revolutionists, were called "*impossibilists*" by their American Socialist colleagues, because their methods were deemed impossible in this country.

The other faction, which prevailed, was composed of "opportunists," so-called because they made "*immediate demands*" for what they could get, bit by bit, through legislation, for gradually fastening Socialism insidiously upon us.

The *open* revolutionists were beaten every time by Morris Hillquit, chairman of the Convention, Victor Berger, and other powerful Socialist leaders, who told the delegates not to make themselves "ridiculous," not to make themselves "a laughing stock," etc., by demanding the full Socialist establishment at once.

So clearly was it seen Americans would not knowingly accept Socialism.

DIGGING OUR OWN GRAVES

A New York delegate explained to the Socialist convention the "bit by bit" policy of tricking us into digging our own graves:

Today we are seeing encroachments after encroachments on the regime of private property in the means of life, and every time a utility is taken over and made public by nationalization, even with a capitalist government in control, so much does it limit the area of private ownership.

President Roosevelt is a good deal wiser than some of the delegates here, because he saw the encroach-

ments upon private ownership, and called them the greatest national disaster that can take place; he does that because he knows that when one encroachment is made upon the arena of private property, it means opening the door to all others. . . . They are playing into your hands, because you understand the philosophy of the situation and they do not. . . . The capitalists themselves are digging their own graves, and when you see a little bourgeois shouting for government ownership of gas, or telephones, or telegraphs, you simply see him digging shovelful after shovelful out of the hole in which later we will bury the whole capitalist system. (Proceedings, National Socialist Convention, 1908, pp. 172-3.)

How many shovelfuls we have dug out of our own graves—how far we have progressed towards Socialism—may be measured by noting how many of the political and industrial “immediate demands” of the 1908 Socialist platform have been enacted by the two major parties.

SIX SOCIALIST LAWS

Of the eleven *political* “immediate demands” of the Socialists in 1908, *six* have become laws (two of them Federal amendments) or are pending in the present Congress, put over by Republicans and Democrats, and *ten* of the eleven have been actively agitated.

1. “The extension of inheritance taxes, graduated in proportion to the amount of the bequest and to the nearness of kin.”—enacted September 8, 1916.

2. “A graduated income tax”—proposed as a Federal Amendment, July 12, 1909, and proclaimed Feb. 9, 1913.

3. “The initiative and referendum, proportional representation and the recall”—adopted as constitutional amendment by several States and proposed as a Federal “Gateway Amendment.”

4. “Unrestricted and equal suffrage for men and women, and we pledge ourselves to an active campaign in that direction”—proposed as a Federal Amendment (Woman Suffrage) June 4, 1919, and proclaimed, Aug. 26, 1920.

5. “The Bureau of Education to be made a Department”—pending.

6. “The separation of the present Bureau of Labor from the Department of Commerce and Labor and the establishment of a Department of Labor”—enacted March 4, 1913. (See Proceedings, National Socialist Convention, 1908, p. 323, for full texts of “immediate demands.”)

The five remaining Socialist “political demands” of 1908, not as yet enacted, are:

(1) “The abolition of the Senate”; (2) “The

abolition of the power usurped by the Supreme Court of the United States . . .”; (3) “That the Constitution be made amendable by majority vote”; (4) “That all judges be elected by the people for short terms,” etc.; (5) “The free administration of justice.”

Of the six parts of the *industrial* “immediate demands” of the Socialists in 1908, the two referring to *Federal* legislation were both adopted and declared unconstitutional:

1. “The improvement of the industrial condition of the workers. . . . by forbidding the employment of children under sixteen years of age,” and

2. “By forbidding the interstate transportation of the products of child labor. . . .”

These *industrial* “immediate demands” were the germs of the McCormick-Foster Federal Child Labor Amendment, transmitted to the States June 2, 1924. Child labor was discussed at great length at the Convention, and the necessity of doles for children to supplement it. (Proceedings, pp. 206-211.)

These demands were enacted as the first Federal Child Labor Law, September 1, 1916 (Public 249, 64th Congress), and declared unconstitutional June 3, 1918, by the Supreme Court in *Hammer vs. Dagenhart*. It was followed, Feb. 24, 1919 (Public No. 254, 65th Congress), by another Federal Child Labor Law, which was also declared unconstitutional by the Supreme Court, May 15, 1922, in *Bailey vs. Drexel Furniture Co.*

Immediately a number of Federal Child Labor Amendments were introduced, so determined were the interlocked groups pressing for control of children, and *the one drafted and demanded by Mrs. Florence Kelley* was proposed as a Federal amendment!

All of these things have been accomplished with never more than one *open* Representative of the Socialist Party in Congress.

Mrs. Kelley, who was chief draftsman of the amendment proposed (See Senate Report on S. J. Res. 1, 68th Congress, pp. 49, 90, 91, 92, 123, and *Congressional Record*, May 31, 1924), testified at the Senate Child Labor Amendment hearing (p. 49) that she had “*been trying for 40 years to mold public opinion*” in favor of such legislation. It will be shown hereafter, by Mrs. Kelley’s own testimony, that for 39 years she has scorned “palliatives” and worked for these

measures *only as steps leading to full Socialism*.

[EDITOR'S NOTE: The following confirmation of the above Socialist policy and record was published a few days after the petition was presented to the Senate]:

"CAPITALISM CAN ONLY DIE BY INCHES"

(From the *Milwaukee Leader*, Socialist organ, owned by Victor Berger)

The truth is that, as we said the other day, capitalism can only die by inches. It does not know any other way to die. It is not like a steer, which you can kill with one blow of a hammer. It is more like an iceberg which can melt only by degrees. The Russians thought they had killed capitalism outright, but they discovered that they had not and they were compelled to back up and let it die by inches.

Of course, this fact—that capitalism can only die by inches—is not due to any magic quality in capitalism itself. It is due to human nature. Human beings—most of them—cannot readjust themselves fast enough to go directly from one social system into another. A few of us could do it. We flatter ourselves that we could do it easily, and so far as we are concerned we would be glad to have Socialism established overnight. But we know it cannot be done, because the mass of humans are not built that way. *Socialism has to be gradually merged into Capitalism. Society has already gone a long distance toward Socialism—and one of these days we shall undertake to prove it.* (Quoted in *New York World*, May 30, 1926, "Voice of Union Labor and The Radical Press" department.)

Your petitioners are not interested in the philosophy of Socialism, or in conditions in Russia, per se. Our interest is purely practical. We are only concerned with the infecting of our own people and Government, and with the agencies and instruments whereby Socialism is secretly inoculated into "the flesh and blood of Americans. Moreover, with two great former Empires (Germany and Russia) captured and controlled by Socialists and Communists—and now in open alliance—and with the French, British and Italian Governments all having undergone disastrous Social control within the last few years, it would seem the blindness of folly for Americans to disregard the fact that now, not only Socialist organizations, but *great Socialist and Communist foreign governments*, with millions for propaganda at their command, have a direct material interest in promoting *every form of Socialism* in America that may weaken the energy, cripple the man-power, interrupt the industry, or sap the financial and political founda-

tions of the United States—the most "magnificent country to loot" for a bankrupt world.

CANNOT BE TAKEN AT FACE VALUE

No true consideration of these Socialist measures can stop at their mere texts—their face value—legally or logically. We quote the highest legal authority for consideration of the *implications, intentions, tendencies* and real *substance* of these bills.

The Supreme Court of the United States has repeatedly declared that it will "look through the form of any proceeding to its substantial character"; that "what is reasonably implied is as much a part of it as what is expressed" (256 U. S. 370-377); and that the "wishes and opinions" of organized private advocates of a measure, after they have prevailed and the measure is enacted, may express legally "an altogether probable intent." (262 U. S. 100.)

Moreover, we have a right and duty to consider not only the proclaimed wishes and intentions of advocates, but also the *tendencies* of a measure.

Abraham Lincoln, in his debate with Douglas, Oct. 15, 1858, declared:

"When I propose a certain measure or policy, it is not enough that I do not *intend* anything evil in the result, but it is incumbent on me to show that there is not a *tendency* to that result."

Your petitioners respectfully proceed with:

MEMORANDUM OF EVIDENCE

1. *The Congress and Public Tricked*.—From its start with the establishment of the Federal Children's Bureau, to the pending Phipps-Parker and Curtis-Reed Bills, the Kelley Program has been marked by fraud and deceit. One by one, it will be shown that not one of the measures has been offered in good faith, has meant what it said, or could be taken at its face value.

**(A) ESTABLISHMENT OF CHILDREN'S BUREAU
APRIL 4, 1912**

The floor sponsors of the Borah-Peters Bill of 1911 for the establishment of a Federal Children's Bureau thought they were creating a little fact-finding, statistical agency, to cost \$29,000 or \$30,000 a year, to gather statistics on children, with no administrative authority. Instead, they were setting up a central apparatus of power over youth, capable of unlimited expansion and

penetration into the homes of the people, not along health lines, as the public supposed, but for economic and Socialistic propaganda.

Like the Sheppard-Towner Maternity Bill of 1921, the Borah-Peters Bill to establish the Bureau was a much reduced form of previous bills, due to no change whatever of intention or purpose or scope, on the part of the backers, but necessitated by the opposition encountered. It is the old camel's-nose-under-the-tent strategy.

It deceived Senator Borah and Representative Andrew J. Peters of Massachusetts into sponsoring the bill establishing the Bureau. In his speech of 1912, Senator Borah said:

There have been a number of bills covering this subject introduced from time to time in the Congress, but most of the measures heretofore have gone much further than this Bill proposes to go, and have undertaken in a measure to legislate concerning the question of the employment of children in manufacturing establishments and elsewhere, and have been thought to intrude or impinge upon the peculiar rights of the States. I am not myself and have never been in favor of extending this kind of legislation to the point where it might be said to impinge upon the rights of the States. But this Bill goes no further than to gather the information, such as is now being done by the Government in other departments concerning other matters of interest. . . .

The amount of appropriation in the Bill is about \$29,000, possibly \$30,000. The bills as they were originally introduced concerning this particular subject carried appropriations much larger than that, but the Committee reduced it to the lowest figure possible to still maintain something like an active and vital bureau.—(Congressional Record, January 8, 1912, pp. 702-703.)

The Bill's House sponsor, Representative Andrew J. Peters, was positive as to the proposed Bureau's cost:

Mr. Peters: The total expense contemplated by this Bill for the chief, assistants, for the experts, clerks and everything else amounts to \$29,440, annually, including rent and various salaries and expenses of the people connected with it. . . .

The Chairman: You think that the cost of this bureau will only be \$29,000. You have in mind, I presume, the cost of clerical work here at Washington?

Mr. Peters: Yes, the cost of clerical work here at Washington.

The Chairman: Would it not also require in order to make the bureau effective, considerable field work and also printing and work of that kind?

Mr. Peters: This includes the expenses of all the men engaged in field work. It includes the expenses of everything except printing. (Hearing, House Com-

mittee on Labor, on H. R. 4694, 62d Congress, 1st session, May 12, 1911.)

The Peters Bill went through the House under suspension of rules. The late Representative Swager Sherley of Kentucky protested.

It was made impossible to debate it in the time now at the disposal of the House, and it is an indictment of this procedure of the House that this Bill should be considered under a suspension of the rules, with only 20 minutes debate on a side. . . . There is not the slightest excuse to insist that this House shall today, with only 20 minutes to a side for debate, without power of amendment, pass this bill. (Congressional Record, April 2, 1912, p. 4222.)

It may be noted that exactly the same tactics on the floor of the House were used to get through the present Parker Bill (H. R. 7555) on April 5, 1926.

The extent of the sponsor's miscalculation as to the Bureau's cost is revealed in the following table compiled by the Budget Bureau, showing an increase of over 3,000 per cent in 13 years:

APPROPRIATIONS OF THE CHILDREN'S BUREAU, DEPARTMENT OF LABOR

Fiscal Year	Salaries and Expenses, Including Bonus and Classification	Enforcement of Child Labor Law	National Security and Defense*	Maternity and Infancy Including Bonus and Classification	Total
1913....	\$ 21,936	.....	.....	.....	\$ 21,936
1914....	25,640	.....	.....	.....	25,640
1915....	161,265	.....	.....	.....	161,265
1916....	164,640	.....	.....	.....	164,640
1917....	164,640	\$ 50,000	.....	.....	214,640
1918....	280,581	100,000	.....	.....	380,581
1919....	283,610	125,000†	\$250,000	.....	658,610
1920....	310,008	.....	.....	.....	310,008
1921....	294,874	.....	.....	.....	294,874
1922....	295,476	.....	.....	\$ 490,067	785,543
1923....	339,829	.....	.....	1,241,600	1,581,429
1924....	341,906	.....	.....	1,241,692	1,583,598
1925....	325,900	.....	.....	1,007,092	1,332,992
1926....	313,000	.....	.....	1,000,000	1,313,000
Totals..	\$3,323,305	\$275,000	\$250,000	\$4,980,451	\$8,828,756

*The \$250,000 under "National Security and Defense" was from the President's fund in 1919.

†The appropriation for Enforcement of Child Labor Law, 1919, \$125,000, was not used, as the Child Labor Law was declared unconstitutional before the appropriation became available.

The Bureau's campaign for power increased from "authority to gather facts and statistics" in 1912, to demanding and securing the passage and administration of the Federal Maternity Act of 1921 (drafted in the Bureau for the Bureau) and finally reaching out for Children's Bureau control of all "persons under 18 years of age" through the Federal Child Labor Amendment!

The Bureau was never intended by its real backers to confine itself to investigation. A month after the Bureau was created, the *Woman's Journal*, now the *Woman Citizen*, formerly official organ of the National American

Woman Suffrage Association, of which Mrs. Kelley was vice-president, declared editorially:

"We shall not be willing to let the establishment of the Children's Bureau mean simply investigation—it must mean power to change things." (Woman's Journal, May 11, 1912.)

Again, while Senator Borah was confident the Bureau would not "impinge upon the peculiar rights of the States," Miss Jane Addams, co-worker with Mrs. Kelley, and head of Hull House, Chicago, in which Mrs. Kelley (and both the former Chief and the present Chief of the Children's Bureau, Miss Julia C. Lathrop, and Miss Grace Abbott) was a resident for several years, stated flatly that the Federal Bureau was desired precisely for the purpose of *wiping out State lines* that had hampered the activities of the National Child Labor Committee. In an article published with the Senate Report on the Bill establishing the Children's Bureau, Miss Addams declared:

"How absurd State lines are when it comes to industrial questions. . . . A Federal Bureau naturally would have nothing to do with State lines and only a Federal authority could adequately deal with such a situation. . . . These problems must be dealt with by a Federal authority having power to transcend State lines." (Senate Report No. 141, 62d Congress, 1st Session, on S. 252 by Senate Committee on Education and Labor.)

The bill establishing the Bureau met with powerful opposition in the Senate, led by Senators Bailey of Texas, Gallinger of New Hampshire, Heyburn of Idaho, Overman of North Carolina, Stone of Missouri and Works of California.

Attempts to amend the bill to protect citizens from invasions of their homes by Government agents, introduced by Senators Thornton of Louisiana and Culberson of Texas, were twice defeated.

Senator Heyburn declared:

"We have now placed the stamp of disapproval on Article IV [amendments] of the Constitution of the United States."—the so-called *Right of Castle*. (Congressional Record, Jan. 31, 1912, p. 1576).

Senator Borah had opposed the amendments, saying:

"It renders less effective the measure and it would be very unfortunate for the bill if it

were adopted." (Ibid. Jan. 31, 1912, p. 1575.) Senator Culberson commented:

"The Senator from Idaho having charge of the bill said if the amendment was adopted it would destroy the very purpose of the bill, showing that it is contemplated that these officers shall enter private residences if necessary."

Senator Culberson thereupon introduced a third proposed amendment, having the same purpose as his previous amendment:

"But no official or agent or representative of said Bureau shall, over the objection of the head of the family, enter any house used exclusively as a private residence."

This passed by a narrow margin (39 to 34) but the bill's Senate sponsor voted "no" on all these amendments to uphold the "Right of Castle." (Congressional Record, Jan. 31, 1912, pp. 1575, 1576, 1578.)

ONLY LEGISLATIVE ADVICE

This inhibition without "teeth" or a penalty clause, in the Act creating the Bureau, unfortunately amounts merely to legislative advice, and seemingly has not curtailed Bureau officials' activities.

The same struggle to protect citizens' homes from invasion took place when the Maternity Act of 1921 was enacted. After vigorous pleas for the "Right of Castle" by Senator Reed of Missouri and others, another futile gesture was made, merely declaring that officials shall have no "right" to invade homes under the Maternity Act, but providing no penalty whatever for disregard of this provision.

Few better illustrations that "a law without a penalty is only legislative advice" can be cited than these gestures of pretending concessions to the Right of Castle in the Act creating the Children's Bureau and in the Maternity Act.

Senator Weldon Brinton Heyburn alone saw the Communist background of the Bill to establish the Children's Bureau, and fought it with prophetic insight:

While upon the face of this measure it merely provides for the taking of statistics, the accumulation of knowledge, yet we know from other measures which have been introduced, some from the same source, that it contemplates the establishment of a control through the agencies of Government, over the rearing of children. There are other measures now pending in committees of this body going much fur-

ther, going to the extent of interference with the control of a parent over the child. . . .

The frequency and insistence of this class of legislation seem to be growing with accelerated speed. The jurisdiction established over the children of mankind in the beginning of the human race has worked very well. It is in accord with the rules of Nature. It is based not upon duty but upon the human instinct that established the principle upon which all duties rest. The mother needs no admonition to care for the child, nor does the father. The exceptions to that rule are such as those to the rule against taking human life. . . .

"No one can be more sympathetic than I am with the needs, the welfare and the comfort of the children of the country, but I am not willing to substitute any other control for that of the parent. I would control the parents, if necessary, when they would violate the recognized rule of the domestic establishment . . . but I would do it through the police laws of the land, the local laws. . . .

Are we to create as this contemplates, in every State and Territory and corner of the United States, a nursery that shall pass upon the wisdom of the mothers and the fathers of the land? Are we, as this contemplates, to appoint Federal officers to superintend the nurseries of the country or the cradles of the poor? Are we through this agency to say what school of medicine shall be invoked for the assistance of the child that is ill? Are we to provide that someone may step in and be substituted for the parent in the care of the child merely because of a difference of opinion? (Congressional Record, Dec. 11, 1911, p. 189.)

Does anyone suppose that the law would be so administered as to deal equally with the children of all classes? Would it inquire whether or not the habits of the parent of wealth were such as to exercise a proper influence over the mind of the child of wealth, or do they propose to inquire whether or not the moral character and habits of the rich parent are such as to constitute a worthy example to the children of those parents? Do they propose to follow the child of the rich into the schools, into the colleges, into whatever institution the child is sent to obtain an education, to ascertain whether or not the morals of that child need public supervision or public exposure? . . .

This matter has been discussed in newspapers and in speech and in letter always from the standpoint that it was the children of the poor that needed the care and supervision of the Federal Government, and that the money was to be appropriated for the advancement and the uplift only of the children of the poor. . . . Do you think the morals of the people of wealth in this country are superior to the morals of the people who labor for their living and who constitute, probably, 90 per cent. or more of the population? . . .

There may go into the household of the poor man who is defenseless against this inquisition, a man stamped with authority, or who thinks he is, and he

may ask the resident questions as to his habits, as to his wife's habits, as to the habits of the adult members of the family, as to whether they play cards, or drink, or gamble, or dance, and they you have made a record by which the child is to be judged. or the parent or guardian is to be judged. You have indulged in an inquisitorial proceeding, which, except for the purpose of discovering crime or enforcing the law against it, we ought never to permit under the laws of this country. . . .

They would not attempt to execute it except as against the class that is most helpless in their hands—those who toil for a living and do the best they can. (Congressional Record, Jan. 30, 1912, p. 1526.)

WOULD HAVE TAKEN LINCOLN FROM HIS PARENTS

That kind of a law would have taken Abraham Lincoln from his parents' care and custody and have had him educated by these theorists and interferers with the domestic economy and system of mankind. He never would have been allowed to live at home, poor as he was; his parents would not have been allowed to keep him. Some committee of the description I have already stated would have gone there and said, "What, allow that child to lie down there and eat corn pone and hoe cake by the hearth; he cannot possibly amount to anything; we want to take him down to the headquarters, where we are drawing salaries for taking care of that kind of people." That is what they would say. (Congressional Record, Jan. 8, 1912, p. 704.)

I have a large correspondence in regard to this matter which tells the purpose of it, because those who favor it tell in their letters what they expect to do under it. . . . I asked them specifically what their object was in supporting this measure, which they insisted I should vote for. I asked them what they hoped to accomplish. Their answer, if not in uniform speech, in spirit is that they hope to be in a position to exercise jurisdiction over children who in their judgment are not being properly cared for. They want to become substitutes for the parents. Perhaps some of them may be parents. Many of them to my knowledge are not. But they are anxious to secure an opportunity, which they have not improved on their own part, of becoming the parents in fact of other people's children. (Congressional Record, Jan. 24, p. 1248.)

INQUISITORIAL PROCEEDINGS

It will be found that the predictions of Senator Heyburn, in 1912, really *minimized* the degree and character of the inquisitorial proceedings which have actually been practiced by the Children's Bureau.

The Bureau was directed to investigate "infant mortality"—as a health matter, the people supposed. Instead, as the Bureau Chief declared:

"None of the studies made by the Bureau at-

tempted to approach the infant mortality as a medical question. They are concerned with the economic, social, civic, and family conditions surrounding young babies." (Miss Julia C. Lathrop, former Chief of Children's Bureau, in signed article, "Income and Infant Mortality," American Journal of Public Health, Vol. IX, No. 4, Ap. 1919, pp. 270-274, reprinted and circulated by the Children's Bureau.)

Instead of approaching infant mortality as a medical—or health—question, the Bureau checked-up the salaries of husbands, not only by subjecting their wives to inquisition, but by actually inspecting pay rolls. Miss Lathrop says:

The surroundings of each child were traced through the first year of life . . . by women agents of the Bureau who called upon each mother. . . . While it was plainly necessary to accept the mother's statement with reference to matters directly pertaining to the daily life of the baby, it was thought that she might not always know about her husband's earnings and that other sources of information might be more important. Pay rolls were consulted and employers and the fathers themselves were interviewed. (Ibid.)

The Bureau was interested in husband's salaries, not as a health matter, but as a basis for Socialistic propaganda, for after making several of these investigations in a few towns, and issuing reports thereon purporting to show that the children of the poor are neglected and not properly cared for without Government interference and subsidies, the Bureau, in its official book, "Standards of Child Welfare," declares:

"The logic of the evidence adduced seemed to indicate that a very large ratio of the families of the United States obtain incomes too small to make possible the rearing of children in the manner which scientific and humane considerations, as well as the prosperity of the Nation, demand."

At page 45 of the same Children's Bureau book, we find what has been described by Senator Reed of Missouri as "this choice bit of Communism":

"The cost of living must come down or there must be a *nationalization of financial responsibility* which will relieve the individual family of a "portion of the cost which they must now bear, or wages must rise to cover the cost of living."

Not even Sentaor Hevburn could have dreamed, in 1912, that the Children's Bureau, under authority to investigate "infant mortality" would

recommend "*nationalization of financial responsibility*"—straight Communism—to reduce infant deaths!

The sponsors of the Children's Bureau Bill, in 1912, were tricked by its Socialist backers into believing it merely an information bureau to promote child health by gathering and distributing statistics thereon.

(B) THE MATERNITY AND INFANCY ACT, NOV. 23, 1921

The second legislative fraud was the Shepard-Towner Maternity and Infancy Act, whereby the Children's Bureau—the \$29,000 a year "statistical agency"—reached out for *administrative* power in the States over mothers and children, with a proposed \$4,000,000 a year Federal subsidy (to be matched by the State) with which to purchase State and local obedience to the Bureau's Federal "Minimum Standards."

The Maternity Act specifically extended the Children's Bureau's activities to *include women*, and, contrary to popular belief, the Bill's backers were not mainly concerned with the health of mothers, but with the "*economic and social conditions surrounding women and children.*"

In proof of this, the following official statements are quoted:

Miss Julia C. Lathrop (then Chief of the Children's Bureau):

For seven years the Children's Bureau has devoted much attention to the subject specifically stressed in its organic act, namely, infant mortality. *None of these studies, it should be stated, are medical studies.* They consider the economic, industrial, social, civic and family factors surrounding the child and mother. . . . The figures of family income gathered by the Bureau prove irrefutably that a large proportion of babies are born into homes where the income cannot cover the expenses of satisfying the reasonable requirements of mother and baby. (Hearings, Senate Committee on Public Health and National Quarantine, May, 1920, p. 11.)

Family well-being involves many services, among them, those of teacher, physician, nurse, social economist . . . hence members of the Federal Board represent education, health and social economy. (Ibid. p. 11.)

Again:

Mr. Winslow (Chairman House Committee on Interstate and Foreign Commerce): "Is this not specifically a medical proposition?"

Miss Lathrop: "I do not so regard it; and I am sure that anyone who had time to read the successive reports of the Bureau upon infant

mortality would not feel that this bill is primarily a medical proposition. I think it is a *social and economic proposition*, and we cannot ignore those basic aspects of it." (Hearings, December, 1920, pp. 20-21.)

Mr. Winslow: "Is there any doubt that this particular undertaking covered by this bill is a health consideration?"

Miss Lathrop: "My judgment is that it is not altogether a health consideration. The inquiries that led up to it were *not medical*, but were chiefly in the social and economic field. And the principles to be applied in administering this law are largely in the social and economic field, and it is not a health measure in the sense in which the prevention or cure or treatment of disease is a health measure." (Ibid, page 20.)

In short, Miss Lathrop argued repeatedly that *preventing the deaths of mothers and babies* is not regarded by the backers of the Maternity Act as a *medical and health* question, and that their interest in maternal and infant mortality lies in "social and economic" remedies—such as "nationalization of financial responsibility," investigations of husbands' incomes, "maternity benefits" and Federal subsidies as "*the principles* to be applied in administering this law!"

Dr. Anna A. Rude, Director of the Division of Hygiene, Children's Bureau, testified to the same effect:

This proposed bill has a broader scope than a purely health bill. That is one of the reasons for not putting it under the Board of Health. . . . As I think I stated before, this bill is intended to be a much broader bill than a purely health bill; its real purpose is for educational extension work and that is the reason for having it under a separate board. . . . This bill is really broader than a simple health measure. (Hearing, House Committee on Labor, January, 1919, pp. 50-52.)

Dr. Charles E. Sawyer (Brig. Gen., President Harding's physician) testifying in favor of the Maternity Act, declared:

"This really is a sociological subject. I believe it belongs to the Social Service Division of the new [proposed] Welfare Department. . . . My understanding of this bill is that it handles the sociological side. Do I make myself clear? *It does not handle the medical side of maternity.* It handles the social relations. . . . As I understand the matter *in conversing with those who are interested in this bill* . . . it seems to me . . . that this would go to the Social

Service Division of the [proposed] Welfare Department?

Mr. Cooper (Member of the Committee): "General, you said a few moments ago you thought that this measure was more sociological than medical, did you not?"

Dr. Sawyer: "Yes, sir." . . .

Mr. Graham (Member of the Committee): "Let me see if I get your idea. You conclude that this is *purely a sociological question*?"

Dr. Sawyer: "I do." . . .

Mr. Graham: ". . . When you want to embark upon the line of sociology by the Federal Government, the field is boundless, and, so far as I am concerned, I cannot see the end." (House Hearings, July, 1921, pp. 126-130.)

THE "INDUSTRIAL END" OF MATERNITY AND INFANCY

Mr. Winslow: "Can you tell me why you were assigned to the Department of Labor?"

Miss Lathrop: "A very large proportion of the children of this country are the children of people who work with their hands; and there is a sound and natural connection between a Bureau which is intended to understand and to improve the condition of children and child life, and a Department whose duty is to improve the condition of working people."

Mr. Winslow: "Well, that was when your office was created and began to function. It bore more directly on the labor side then."

Miss Lathrop: "We have an industrial division now, and we are constantly making industrial studies."

Mr. Winslow: "That is what I mean; you are tied up to the industrial end of it more particularly." . . .

Mr. Winslow: "Would it cause any hindrance to the progress of your work if you were to be transferred to the United States Public Health Service?"

Miss Lathrop: "I should regard it as a fatal error to transfer a bureau whose business it is 'to investigate and report upon all matters relating to the welfare of children and child life' to the sole supervision of physicians, earnestly as I may respect physicians."

Mr. Winslow: "Well, you did draw in a medical branch to your office when you entered this field?"

Miss Lathrop: "Yes; we did draw in medical

advisers later, when we had more money. We are aware that there are aspects of life which require the services of physicians, but they are a small part of child welfare, and must be considered in relation to the social field." (House Hearings, December, 1920, pp. 19-20.)

Mrs. Florence Kelley (General Secretary of the National Consumers League) testified:

"The National Consumers League has been interested for several years in the movement for compulsory industrial health insurance for working people. We have also been interested in legislation providing for a period of compulsory rest of expectant mothers before and after the birth of their children. Both of these measures are vain until the passage of this bill. . . .

"The Consumers League interests itself primarily in the employees in the industries." (Senate Hearings, May, 1920, p. 51.)

After admitting that her League was interested in "compulsory industrial health insurance" and "maternity benefits" (which are *straight German Socialist schemes*, rejected by every State in this Union, and opposed by American organized labor) and that she regarded the Maternity Act as a step towards their enactment, Mrs. Kelley nevertheless ended her testimony with an impassioned indictment of Congress:

"Inaction shrieks to Heaven at the present time. . . . Why does Congress continue to wish to have mothers and babies die?" (Ibid., p. 53.)

HEALTH FRAUD FURTHER REVEALED

The original Children's Bureau Maternity bill proposed to appropriate \$4,000,000 annually by the Federal Government (to be matched by the States) and included a provision for "medical and nursing care for mothers and infants at home or at a hospital when necessary, especially in remote areas."

That was to make believe that mothers and infants would receive actual assistance—especially in "remote areas" and rural districts—but it was demonstrated in the first Senate debate that the backers of the bill really intended practically the entire \$8,000,000 a year for "social and economic" investigations, reports, salaries, etc., and were ready to drop any *actual help* to mothers and babies as soon as it seem possible *to pass the bill without it*, but they asked the *full appropriation* to the last.

MARRIAGE AS JUDGED BY THE BOLSHEVIKI. ANOTHER REASON FOR NOT EXTENDING THE MATERNITY ACT.

The question whether marriage as an institution should be abolished, says "A Woman Resident in Russia" writing in the *Atlantic Monthly* for July, is now being debated all over Russia with a violence and depth of passion unknown since the turbulent days of the Revolution. Last October a bill eliminating all distinctions between registered and unregistered marriages and giving the unmarried consort the status and property rights of the legal wife was introduced in the Tzik, or Central Executive Committee. So much unforeseen opposition to the proposed law developed that the Tzik decided to postpone its final adoption until the next session, meanwhile initiating a broad popular discussion of the project.

Since that time factories, offices, clubs, and various Soviet organizations and institutions have passed resolutions for and against the bill, and the halls have not been able to hold the eager crowds that thronged to the meetings in city, town and village. One must live in Russia today, amid the atmosphere of torment, disgust, and disillusionment that pervades sex relations, the chaos, uncertainty, and tragedy that hover over the Russian family, to understand the reasons for this heated discussion, for these passionate pros and cons.

When the Bolsheviks came into power in 1917 they regarded the family, like every other "bourgeois" institution, with fierce hatred, and set out with a will to destroy it. "To clear the family out of the accumulated dust of the ages we had to give it a good shake-up, and we did," declared Madame Smidovich, a leading Communist and active participant in the recent discussions. So one of the first decrees of the Soviet Government abolished the term "illegitimate children." This was done simply by equalizing the legal status of all children, whether born in wedlock or out of it, and now the Soviet Government boasts that Russia is the only country where there are no illegitimate children. The father of a child is forced to contribute to its support, usually paying the mother a third of his salary in the event of a separation, provided she has no other means of livelihood.

At the same time a law was passed which made

divorce a matter of a few minutes, to be obtained at the request of either partner in a marriage. Chaos was the result. Men took to changing wives with the same zest which they displayed in the consumption of the recently restored forty-per cent vodka.

"Some men have twenty wives, living a week with one, a month with another," asserted an indignant woman delegate during the sessions of the Tzik. "They have children with all of them, and these children are thrown on the street for lack of support." There are three hundred thousand *bezprizorni* or shelterless children in Russia today, who are literally turned out on the streets. They are one of the greatest social dangers of the present time, because they are developing into professional criminals. More than half of them are drug addicts and sex perverts. It is claimed by many communists that the break-up of the family is responsible for a large percentage of these children.

The peasant villages have perhaps suffered most from this revolution of sex relations. An epidemic of marriages and divorces broke out in the country districts. Peasants with a respectable married life of forty years and more behind them suddenly decided to leave their wives and remarry. Peasant boys looked upon marriage as an exciting game and changed wives with the change of seasons. It was not an unusual occurrence for a boy of twenty to have had three or four wives, or for a girl of the same age to have had three or four abortions. As the peasants of Borisovo-Pokrovskoie bitterly complained: "Abortions cover our villages with shame. Formerly we did not even hear of them." But the women, in self-defense, replied: "It's easy for you to talk. But if you just tried to bear children yourselves you would sing a different song."

The author of this account was once discussing the subject of frequent divorces with the president of a village soviet. "What makes women get divorces?" she asked him. Just then a girl about eighteen years old entered the room. "Here is our latest divorcee," said the president laughingly. "Ask her." The author turned around but the girl was no longer there, and from the window she saw her running away as fast as she could. I ran after her and finally caught up with her in the fields outside the village. We sat down on a haystack and I asked the girl to talk to me frankly, as woman to woman.

"Tears filled her eyes as she told me that she still loved her husband but that he forced her to ask for a divorce only two months after they had been married. He now thought he loved another girl in the village and threatened to kill his wife if she did not leave him voluntarily."

Several peculiar abuses sprang up in the country districts in connection with the shifting marriage regulations. Many women of light behavior found marriage and childbearing a profitable occupation. They formed connections with the sons of well-to-do peasants and then blackmailed the father for the support of the children. In some cases peasants have been obliged to sell their last cow or horse in order to settle such alimony claims. The law has created still more confusion because it is retrospective in its operation, so that women can claim support for children born many years ago.

Other peasants took advantage of the loose divorce regulations to acquire "summer brides." As the hiring of labor in Russia is hedged about with difficulties and restrictions for the private employer, the richer peasants in some districts took to the practice of marrying a strong girl for the harvest season and divorcing her as soon as the work in the fields was over.

The new sex relations have also raised certain problems in the cities. During the winter of 1924-1925 some of the older Communists accused the younger generation, especially the students, of indulging in too much dissipation, of squandering health and vitality in loose connections; they blamed the girl students for practicing frequent abortions. "You must be either a student or a mother; under present-day conditions you can't be both," declared one mentor to the modern women students. The latter indignantly replied that love was the only cheap amusement left to them and demanded that they be given at least the same opportunity for free abortions that factory women enjoy. Moreover, they retorted that not all the older Communists could serve as a model of pure living.

Both in the villages and in the cities the problem of the unmarried mother has become very acute and provides a severe and annoying test of Communist theories. In the early stages of the Revolution the Communists held the theory that children should be reared and cared for by the State. But it soon became evident that the State, especially in war-torn and impoverished

Russia, was financially quite incapable of assuming such a heavy burden of responsibility. The figure of ten thousand foundlings, reported for thirty-two provinces of the Soviet Union over a period of six months, illustrates the danger that the present large number of vagrant homeless children may be swelled because of the inability or unwillingness of parents to provide for the offspring of temporary connections—*Urologic and Cutaneous Review*, Sept., 1926.

ANNUAL MEETING OF THE RADIOLOGICAL SOCIETY OF NORTH AMERICA

The Radiological Society of North America holds its annual convention at Milwaukee, November 29 to December 4, inclusive.

It will be the largest meeting of its kind, both in attendance and length and diversity of program.

The Plankinton Hotel has been chosen headquarters, while the scientific and clinical program will be held at the Civic Auditorium, which is ideally constructed to handle such a conclave expeditiously and conveniently. Clinical programs, which are an innovation, will be included and will be of interest to the entire medical profession, which is cordially invited to attend.

HEROES OF MEDICAL SCIENCE OFTEN MARTYRS FOR HUMANITY

Six medical men in London, writes Dr. Arthur Selwyn Brown in the New York Herald-Tribune, have permitted themselves to be inoculated with the germs or virus of human cancer in order to test the theory of Dr. W. E. Gye of the Imperial Cancer Research Laboratories, which is that an ultra-microscopical organism is the cause of the development of mamalian carcinoma. This organism is harmless except under special circumstances which favor its growth and multiplication. Such conditions are created by the presence of a certain chemical body which has been called the "specific factor of cancer."

This theory has been proved correct when applied to chickens, and recent experiments indicate that it holds good for mammals also. Experiments with animals having given the results desired, it was necessary to test the theory on human beings and volunteers were called for. Many medical men offered to be inoculated and six were accepted.

So far no serious results have followed the inoculation without the specific factor. The next step is to vaccinate man against cancer. This also will be tried on volunteers. It will be a much more serious experi-

ment, because, to prove it, there must be a subsequent inoculation with the germ and its specific factor.

SCIENCE MARTYRS UNSUNG

Crusaders in science have been numerous since the earliest times. There is so much glamour thrown around sailors who, like Captain Cook, sailed across uncharted seas, explorers who traveled, like Mungo Park, through unknown Asia, and around soldiers like Bonaparte, who destroyed nations by fire, sword and pillage, that the quiet but no less resolute martyrs to science rarely are heard from. Yet, all scientific progress results from the sacrifices and life services of many plucky and resourceful individuals. Medicine is no exception to the rule. It has a long and glorious roll of martyrs in its book of honor.

Thirty years ago the X-rays were accidentally discovered. Experiments were then made to find their medical value and, in the comparatively short period which since has elapsed, more than three hundred scientists have given their lives in this service. Many of these were surgeons who had specialized in cancer research.

Dr. J. Bergonie of Bordeaux, France, was one of the most distinguished X-ray martyrs. He was a specialist in cancer who, during the World War, invented an electric vibrator to restore health to shell-shocked veterans and a magnet for withdrawing bullets and steel from wounds. His zeal in the cause of cancer research caused him to contract the disease. His right arm became infected and had to be amputated. Then the malady developed in his left arm. Racked with pain, he still continued working as a hospital roentgenologist and experimenter on cancer. Death finally called him and caused France to mourn. Marshall Pétain pinned upon his breast in the chamber of death the Grand Cross of the Legion of Honor in recognition of his heroism.

Dr. Dementroux, Mme. Currie, Becquerel, Dr. Charles Vaillant, Dr. Eugene Caldwell of New York, and many other distinguished experimenters have been seriously incapacitated or have laid down their lives as a result of experimenting with radium.

KOCH NOTABLE BENEFACTOR

Preventive medicine owes many debts to Dr. Robert Koch. At the request of the German government that distinguished medical experimenter, at the age of 65, went to East Africa to discover the cause of the sleeping sickness. He remained in a hut on an island in Lake Victoria Nyanza fighting flies and ants and subsisting on impossible foods until he had cleared up the mysteries of the tsetse fly and the disease which it carries.

Koch, in writing to a medical friend in Berlin, indicated the sentiments which led him to do so much dangerous research work in medicine. He said:

"The tsetse flies engage our attention less than their victims. What a wonderful privilege it is to be able to save human beings. It is this that makes it a real joy to be a physician. It really seems that a way has been found to cure the sleeping sickness."

Before Koch made his researches in Africa the

sleeping sickness was considered incurable and whole populations were carried off by it. Now, many thousand square miles of fertile land, once a deadly waste, are freed from the disease and supporting large and prosperous communities.

The bubonic and pneumonic plagues often worked great ravages in Asia. Little was known about these pests until the Japanese-Russian War. Then a bad epidemic of both plagues broke out in Manchuria. Medical men from all parts of the world went to Manchuria and stayed there until all the mysteries of the diseases were cleared up. Chinese doctors and nurses showed unusual heroism in combating these plagues and won the admiration of the European scientists associated with them.

Japanese and British-Indian physicians also have done distinguished work in making researches into the causes and remedies for many tropical diseases. They, too, find the joy which rewards the physician who is able to make scientific discoveries rendering untold service to mankind. Hoffkine, Striga, Ross and Manson are names well remembered in India.

AMERICAN HEROES OF SCIENCE

The names of Dr. Finlay, Walter Reed, James Carroll, Jesse Lazear and Aristides Agramonte are familiar to Americans. Dr. Finlay discovered that a certain species of mosquito was the carrier of the germs of yellow fever which caused so much sickness in tropical America. The other men were nominated by the government in 1900 to investigate the disease.

This committee called for volunteers to test whether the inoculated blood of the mosquito called *stegomyia* caused yellow fever. Seven graduates in the United States army volunteered. Drs. Carroll, Reed and Lazear contracted the fever and either died from it or were so weakened that they did not long survive its effects. A senate report issued in 1912 told that only Dr. Agramonte was living. The other members of the yellow fever commission were dead. This report adds the names of the soldiers who submitted to inoculation and of the nurses who helped in and died as a result of the experiments and tells of the work done in ridding Panama of the breeding places of the mosquito.

The medical men—and women, too—who have sacrificed their lives in the study of contagious diseases are legion. Typhus, typhoid, malaria, scarlet and other fevers have claimed many. Today these once dreaded diseases are safely handled and little thought is given to the pioneers who studied the plagues and formed the basis for their successful management.

MUST BE READY TO SACRIFICE

Every one who takes up the practice of medicine must be ready to sacrifice his comfort and interest and give unstinted service to others. All the great names in medical history readily have done this. The efficiency of medical and surgical practice today is the result of the self-sacrifice of innumerable physicians of the past. Every disease to which the human body is subject was studied in the fullest detail before suc-

cessful means for treating it were arrived at. And an extraordinary amount of anatomical and biological research was necessary before the foundations of modern surgery were laid.

Thomas Addison, known to all surgeons for a disease of organs connected with the kidneys which bears his name, was a great surgeon who did much to promote surgical investigations by his own research and monographs and by the work he initiated in the London hospitals. He sacrificed a profitable private practice for medical research which resulted in greatly improving surgery and medical diagnosis. Long years of intense application in laboratories and hospitals brought on a brain disease which caused his death.

Richard Bright was another surgeon whose labors enriched medical science and brought on his comparatively early demise. Dropsy, kidney diseases, cerebral and spinal diseases, paralysis, tetanus, hydrophobia and many other diseases were illuminated by his studies and monographs. His name now is borne by one of the kidney diseases which he studied pathologically.

Eye diseases were the special study of Sir William Bowman, a wealthy English physician, who was the greatest European authority on ophthalmia. Like Addison and Bright, Bowman studied each disease separately, published monographs as a result of his studies, and then visited all the principal hospitals on the continent to enlarge his views.

VARNIER'S INSPIRED WORK

The life of Henri Varnier, a French surgeon, who died in 1902, shows another type of courage devoted to medical science. His mother died in childbirth, and her death caused him to turn aside from a promising career as a surgeon in the French army to consecrate his life to the preservation of other mothers from a like fate.

He went to Paris and made special studies of obstetric surgery. He mastered the methods of Hunter and Smellie and made use of the laboratory of the anatomist Farabeau to improve them. He soon became the leading European authority on pelvic deformities, and was acknowledged by the French as the leading obstetric surgeon. He invented many beneficial methods in his chosen field and was able to fulfill the vow made at his mother's bedside. But it was done at the cost of his life. His studies and hospital activities weakened his nervous system, and death came to him after the whole medical world had recognized the benefits which his researches had bestowed on humanity.—*Kansas City Star*.

BIOGRAPHIES ARE BUT THE CLOTHES AND BUTTONS OF THE MAN

What a wee little part of a person's life are his acts and his words! His real life is led in his head, and is known to none but himself. All day long, and every day, the mill of his brain is grinding, and his thoughts, not those other things, are his history. His acts and his words are merely the visible, thin crust of his world, with its scattered snow summits and its vacant wastes

of water—and they are so trifling a part of his bulk a mere skin enveloping it. The mass of him is hidden—it and its volcanic fires that toss and boil, and never rest, night nor day. These are his life, and they are not written, and cannot be written. Every day would make a whole book of eighty thousand words—three hundred and sixty-five days a year. Biographies are but the clothes and buttons of the man—the biography of the man himself cannot be written.—*From Mark Twain's Autobiography.*

TEN HEALTH COMMANDMENTS.

From the Chairman of the Public Health Committee of the Associated Physicians of Long Island we have received a clipping from the *New York Times* of May 31, 1926, under the above heading.

The Reverend Doctor Henry Hugh Proctor, in a sermon at the Nazarene Congregational Church, Brooklyn, N. Y., in urging yearly physical examinations as an important part of insurance against disease, gave ten commandments for health, which, as stated in the newspaper clipping were as follows:

"1. Honor your parents by having a thorough physical examination every birthday; for an ounce of prevention is outworth a ton of cure.

"2. Honor your friends by taking a daily bath; for cleanliness is a part of godliness.

"3. Honor your family by having your life insured; for life insurance guarantees the cooperation of the insurer in the prolongation of the life of the insured.

"4. Honor your physicians by avoiding patent medicines; for the most of these nostrums are humbugs.

"5. Honor your stomach by having your teeth carefully examined by a dentist at regular intervals; for bad teeth are an abomination to the system.

"6. Honor your digestion by being careful of your diet; for many a man digs his grave with his teeth.

"7. Honor your lungs by breathing fresh air; for ventilation is a means of grace.

"8. Honor your nerves by taking plenty of rest in sleep; for they who work all day and play all night promote the brevity of their lives by burning the candle at both ends.

"9. Honor your country by obeying the law; for it is a mark of good citizenship to obey a law whether he likes it or not.

"10. Honor your God by chastity in word, thought and deed; for the race that wishes eternity must exalt maternity."

A CASE OF ACUTE INTESTINAL OBSTRUCTION CAUSED BY ASCARIS LUMBRICOIDES.*

By H. B. D. NANHORYA, M. B., B. S. (Bom)

Assistant Surgeon, Main Hospital

RAIPUR, INDIA

On the morning of March 9, 1926, a Mahommedan boy, about 3 years old, was brought to the outdoor department of the main hospital, Raipur, for severe abdominal pain. The history given was that two days

before he developed high fever and next day vomited twice. On the morning of admission he was suddenly attacked with acute pain in the abdomen and had vomited four or five times. The relatives of the patient said that he had passed no motion for 24 hours, but the day before the bowels had moved once and the color and consistency of the stools was normal. They also gave no history of the child ever having suffered from roundworms, although questioned regarding this.

The child was apparently in great agony and was trying all the time. What appeared to be visible peristalsis was noticed in the right hypochondriac region. The patient would not allow palpation or any examination of the abdomen, and hence chloroform was given. Under the anesthetic a firm semi-circular mass about $1\frac{1}{2}$ inches in diameter was felt starting from below the right costal margin and running downwards and inwards to about midways between the umbilicus and the symphysis pubis. The temperature was 99.4 F. respirations were hurried and shallow and the pulse was weak, thready and fast. A provisional diagnosis of intussusception was made and the relatives were advised of the necessity of an immediate operation, after explaining to them the gravity of the situation. They at first refused to allow the operation, but about two hours later consented.

The child was put under choloform and an incision in the median line from the umbilicus to the symphysis pubis was made. On opening the peritoneum some clear serous exudate escaped. The hard portion of the gut about one foot long was brought out. It was found dilated and the intestinal wall so extremely thinned and translucent that a mass of roundworms could be easily seen through it packed tightly together like cigarettes in a round tin. A purse-string suture was inserted in the anti-mesenteric border of the gut and a small incision made inside this area, the other portions of the intestines being in the meantime protected with abdominal towels soaked in hot saline. Thirty-seven roundworms were seized one after another in an artery forcep and drawn out through this aperture and the obstruction thus relieved. Other worms were detected above and below this area, but they were left as they could not be reached through the opening in the intestines without grave risk of infecting the peritoneal cavity, and, moreover, they were not obstructing the lumen of the gut and hence were left to be passed afterwards. The purse-string suture was closed. The wound in the intestines was then swabbed with acriflavine lotion 1-1000 and a little "Bipp" applied. The peritoneal coat of the intestine was drawn over it by Lembert sutures. The intestines were returned to the abdominal cavity, the abdominal wall was closed layer by layer, and the wound dressed aseptically.

March 10, 1926. The temperature came down to 97 F. in the morning. He passed urine and the bowels moved once. His pulse was good, 100 per minute, but he was still drowsy and tympanites was present. He vomited twice during the day. Rectal saline was continued and a powder containing calomel, half grain, compound scammonii powder, two grains, and santalin,

*From the Indian Medical Gazette, August, 1926, page 396.

one grain, was given. In the evening the temperature rose to 99 F., but the pulse was good and the patient was brighter. Blood films did not show any malarial parasites.

March 11, 1926. The temperature rose to 100.8 F. No more vomiting occurred. He passed one motion containing two worms. The pulse was good and meteorism had disappeared. The patient passed 14 worms in all during the day.

March 12, 1926. The patient passed 4 worms and his general condition improved very much. The temperature was coming down slowly. After this the patient made an uneventful recovery, passing daily a number of worms.

Santonin was again administered with calomel and pulv. scammonii co. on March 15, 1926, and the stitches were also removed the same day, the wound healing up by first intention. The patient passed in all 43 worms in addition to the 37 worms removed at the time of the operation, totaling 80 worms in all. He left the hospital on March 19, 1926. He was seen again on the 22nd in perfect health and having passed no more worms.

The operation was performed by my Chief, Lieutenant Colonel W. J. Fraser, I. M. S. Civil Surgeon, Raipur, and I am indebted to him for kindly according permission to my publishing these notes on the case.

COST OF PRIVATE MEDICAL CARE.*1

REPORT ON A STUDY OF COSTS IN PRIVATE MEDICAL PRACTICE

In an address on "The Future of Medicine in America," Dr. Llewellys F. Barker spoke of modern alterations in medical research, education and practice as "revolutionary throughout the world, and above all in America." He said "the medical requirements of the public" should be early recognized by medical men and a campaign of education inaugurated "with the purpose of satisfying them in the best possible way." President Vincent of the Rockefeller Foundation, in his "Review for 1924," pointed out that these changed conditions are most difficult for the general practitioner and that the responsibility for meeting them is upon him particularly.

The Public Health Committee of the Medical Society of the County of Kings, believing that the cost of medical service is a fundamental problem in this situation, undertook a tentative study of private rates at the

1. Conducted by the Committee of Public Health of the Medical Society of the County of Kings with the assistance of the Committee on Dispensary Development of the United Hospital Fund of New York.

*This preliminary study was made possible through the provision, by the Committee on Dispensary Development of the United Hospital Fund, of clerical service in addition to the assignment from its staff of Miss Mildred Terrett who rendered valuable assistance to the Secretary of the Committee on Public Health during the period of active field work by interview and questionnaire and, later, of Miss Mary Jarret who analyzed the data gathered and prepared it for presentation in report form.

The Council of the Medical Society of the County of Kings in February, 1926, authorized publication as a tentative report. The Council instructed the Committee on Public Health to continue the study in cooperation with the proper committees of the Society or other organizations, and to make especial inquiry into the cost of maternity service. Plans for such a continuation are being formulated.

request of the Committee on Dispensary Development and with their assistance.

A member of the staff of the Committee on Dispensary Development was assigned to work under the direction of the sub-committee of the Medical Society. She interviewed eighty members of the society and from them obtained three hundred schedules containing items of expense in cases recently treated by them, representing a selected list of diseases. The discussion in these interviews suggested a questionnaire on the adjustment of medical fees, to which sixty-two replies were received. A fourth set of data was obtained by asking the doctors who had taken part in the society's health examination study, to furnish estimates of the expense they would incur in carrying out the recommendations they had received. Fifty of these reports were secured.

The attitude of the members interviewed toward this study was cordial and helpful. Their expression of confidence in the work of the society's committee was noticeable.

The problem involved in considering the cost of medical service, as indicated in the material collected, will be considered under three topics: (1) The ability of the patient to pay for medical service; (2) doctor's fees; and (3) expenses for sickness in addition to medical fees. The facts quoted are taken from the Brooklyn data unless otherwise indicated. A detailed report is appended to each set of data collected.

THE ABILITY OF THE PATIENT TO PAY

The ability of the patient to pay for medical service depends upon the duration of the illness and the type of the disease, as well as upon the family income and responsibilities.

The cases reported were classified according to duration and expense. Some examples of the conditions classified as short term cases with heavy expense are appendicitis, hernia, diseased tonsils, skin cancer, confinement. Short term cases with light expense included such conditions as tonsillitis, acute sinusitis, ringworm, dislocated shoulder. Some examples of long term cases with heavy expense are gastric ulcer, cystitis, syphilis, urethritis, mastoiditis, cataract; of long term cases with light expense, pneumonia, fracture of arm, ypelitis, scarlet fever. Among chronic conditions were endocraditis, epilepsy, diabetes, varicose ulcer, and feeding cases.

The average cost of treating some of the various diseases included in this group was as low as \$60; other diseases ranged as high as \$300. The cost of treating long-term acute cases was generally less, the average of more than half of these being under \$50; the maximum, however, running as high as \$700. In chronic diseases extending over a long period, the range of cost was wide. The average of some of these diseases was as low as \$25; of other diseases, the cost was as much as \$250.

A few examples of the actual expense of an illness in each of these groups incurred in the year 1924 or 1925 may be given here:

1. Cases of short duration with heavy expense:

Hernia, \$723; fibroid uterus, \$298; appendicitis, \$373; gall bladder, \$274; skin cancer, \$100; operation for convergent strabismus, \$164; confinement cases, \$50, \$110, \$289.

2. Cases of long duration with heavy expense: Bronchial pneumonia, \$210; gastric ulcer, \$252; acute urethritis, \$151; traumatic neurosis, \$710; compound fracture, \$937; mastoiditis, \$229 (reduced fee); ovarian fibroid, \$234 (reduced fee); chorea, \$200 (reduced fee).

3. Cases of long duration with light expense; Pneumonia, \$55; fracture, \$13, \$60 (reduced fee), \$118; ypelitis, \$42 (reduced from \$50); scarlet fever, \$36; endocervicitis, \$36.

4. Cases of short duration with light expense: Otitis media, \$20; quinsy, \$15; ringworm, \$21; hemorrhoids, \$19; tonsillitis, \$10, \$30 (reduced fee).

5. Cases of long duration with distributed expense: Hypertension, \$190; nephritis, \$235; diabetes, \$150; aortitis, \$165 (reduced from \$330).

We do not know the economic status of these patients, nor whether they incurred other expense for illness during the year, nor the family's experience with sickness in previous years.

In over half of the cases, the expense was greater than the amount, \$40, that was found to be the average annual expenditure for services of doctor and dentist for an entire family in the study of the cost of living in the United States made by the United States Bureau of Labor Statistics in 1918-1919, which was published as Bulletin No. 357 in 1924. The investigation covered white families in 92 cities or localities in 42 states, the cities varying in size from New York to small country towns. The information was obtained by personal visits made by agents of the bureau to the homes of wage-earners and small-salaried men. Twelve thousand and ninety-six families were included in the investigation. The family expenditures were classified under "food," "clothing," "rent," "fuel and light," "furniture and furnishings," and "miscellaneous."

These "miscellaneous expenses" represented everything except food, clothing and shelter, including medical care, education, recreation, insurance, church contributions, dues, gifts, carfares, newspaper and magazines the up-keep of household equipment and other items. While some of these items are flexible, depending upon the customs and standards of a particular family, others, such as carfares and insurance, are fixed by social conditions and are necessary in every family. The average amount spent for all "miscellaneous expenses" among all families was 21 per cent of the family income. The percentage varied according to the margin that the income allowed for expenditures not demanded for mere subsistence, being about 18 per cent in the lowest income group and nearly 25 per cent in the highest income group, in which the average income was a little over \$2,500. In individual families, the percentage, of course, will vary considerably, since many factors in a particular family determine the amount available for miscellaneous purposes.

The difference in fees, if any, between 1918-19 and 1924-25 is not known. The difference in wages and

in cost of living has not materially changed. It is felt, therefore, that these estimates are reasonable and fair and correctly represent conditions existing today.

In some of our cases, in which the circumstances of the patient were stated, the cost of a single illness exceeded ten per cent of the annual income. In a few cases the physician's charge was calculated on the basis of ten per cent of the income. If a family with an income of \$2,500, of which \$600 is available for all the miscellaneous expenses mentioned above, should spend \$250 for a single illness, they would inevitably suffer deprivation in some other respects unless they had savings to provide for such a contingency, commercial or fraternal sickness insurance, another possible resource which, however, has been shown by several investigations* to be carried by only a relatively small proportion of wage earners in this country. The annual allowance usually included in an ideal budget for the health of the entire family would often be greatly exceeded by the expense of the illness of one member.

Two-thirds of the families of New York City have incomes under \$2,500, according to the statistics of the New York State Housing Commissioner. The most recent estimate of the cost of living for a family of five in New York City was made by the Labor Bureau, Inc., in 1920. It was based upon the calculations made by the U. S. Bureau of Labor Statistics in 1919, of the minimum budget required by the family of a government employe, in Washington. This budget represented a standard of living which was described in the government report as "bottom level of health and decency below which a family cannot go without danger of physical and moral deterioration." This budget does not include many comforts which should be included in an "American standard of living." Thus, no provision is directly made for savings other than insurance, or for vacations, or for books and other educational purposes.

Different families may be able to manage equally well on different incomes according to their requirements and to their special abilities and resources. Therefore, it seems safe to say that a family of five in this city requires an income of \$2,200 to \$3,000, according to their standard of living, for the necessities of life, without allowance for the care of health beyond a small outlay for minor illnesses. When severe illness comes to such a family, some of the necessities of life must be sacrificed, and the standard of living is lowered temporarily or even permanently.

THE COST OF SICKNESS

The cost of sickness is unevenly distributed among individuals and among families. A thousand families described as families of "self-supporting workmen" were studied by the Public Health Committee of the New York Academy of Medicine in 1919. Nearly 17 per cent of these families spent nothing for sickness in a year and only 8 per cent spent over \$50. Thirty-seven per cent of these families had been attended by

*Report of the Illinois Health Insurance Commission, 1919, page 147; Report of the Pennsylvania Health Insurance Commission, 1919, pp. 156-158."

private physicians and one-fourth had received treatment at hospitals and dispensaries. Among 1,226 workmen's families in New York, Philadelphia and Boston, included in the investigations of the United States Bureau of Labor Statistics in 1918-1919, referred to above, there were 28 families who had no expense in a year for sickness or death; 60 per cent spent \$50 or less; 25 per cent between \$50 and \$100, and 13 per cent spent from \$100 to \$250 or more.

It has been estimated that over a period of years the average workman's family spends between 3 per cent and 5 per cent of its income for medical care; but it is obvious that in connection with a particular illness, a patient's ability to meet the expense can be estimated only by comparing all his resources and obligations at that time. Studies of the amounts actually spent by families for sickness, moreover, do not show whether the medical service received was adequate and efficient, nor how much of it was received free. Besides, we know that all illness does not receive medical attention. Sickness surveys in various communities have shown that 25 per cent to 50 per cent of those who were ill at the time of the survey were not receiving medical care.

While no accurate estimate can be made of the amount of sickness to be expected in a given family during a year and the expense it will entail, general estimates of average expenditures for sickness may serve as a warning that special consideration should be given to a patient's ability to meet a cost for illness out of proportion to the estimated probable expense. The estimated ability of a family of four or five members with an annual income of \$2,500 to pay for the care of health (including doctor, dentist, nursing, medicines, etc.) would not be over \$100 in a year. This may be a sufficient amount to cover illness involving light expense. But if some of the more severe conditions mentioned above occur in such a family, entailing an expense of \$100 to \$700 for a single illness, they must necessarily either go without adequate care or give up or curtail something else that is regarded as essential. What is regarded as "essential" is, of course, a matter varying in different families and on which opinions might differ.

THE BROOKLYN STUDY

Our study clearly indicates a desire among Brooklyn doctors to give their services at a cost that self-supporting patients of small means can afford. It is also clear that as a group they are not conscious of a class of persons in their community whose incomes are sufficient for ordinary living expenses, but insufficient for medical care in severe illness. Somewhat less than half of the doctors said that they were aware of this problem. Some said that there was a decided need to study the question and others thought there was no problem of this sort in Brooklyn. Others assumed that as their patients did not complain of the fees, they found no difficulty in paying them.

Others said their patients did experience difficulty in meeting the cost of sickness, particularly where there was need for (1) operation, (2) long continued treat-

ments and diagnostic examinations involving the use of expensive facilities. One doctor said he often wanted cardiograms or X-ray examinations, but did without them because he knew his patients could not afford them. Another said that he believed that patients sometimes pay large sums for medical care when they cannot properly afford it. Others thought it was almost entirely a question of thrift whether the patients were able to pay. One doctor said that the patients who ask for reduction of fees are not necessarily the ones who need it.

Some of the doctors said they sent their patients to dispensaries when they could not afford their fees. Most of the doctors interviewed expressed interest in the question whether the dispensaries were being used justly. A few thought dispensaries were unnecessary and others thought they were used by patients who could afford to pay. In New York City, in one year, 19 per cent of the population are estimated to have attended dispensaries. It is impossible to estimate the percentage who are actually in need of free medical service; but many social workers are of the opinion that there is a class of persons attending dispensaries who could pay moderate fees and would prefer to do so if they knew how to secure efficient medical care at a cost that they could pay without sacrificing other essentials.

This was pointed out by Lawson Purdy, of New York, in a recent address at the New York City Conference of Charities and Correction. After speaking of the facilities afforded to the rich and the very poor, he said, "We have neglected the great number of people in between who want to pay their way. By neglecting these, we undoubtedly are increasing the number of persons who could and should pay the cost of service, but have not the chance to pay and so get served for nothing." He raised the question, "To what degree in our health work are we doing these two things—seeking to afford the opportunity for people to get the best service at reasonable rates, and training people to seek such services?"

Some attempts to give medical service at reduced cost in Brooklyn that were referred to in the interviews are, the lodge doctor; the insurance company; the practice of having younger assistants to whom poorer patients may be referred, and the medical institute equipped for all forms of diagnostic work.

The comparative costs of preventive medical care and curative medical service is a question of fundamental importance of which we have at present no knowledge. It is estimated that in addition to the two or three per cent of persons in the community who are incapacitated by sickness, there are between two and four per cent who are suffering from the effects of illness but able to keep at work. The Life Extension Institute found fifty per cent of supposedly healthy persons to be in need of important medical attention. Among fifty physicians who were given health examinations, as members of the Medical Society, County of Kings, thirty-six reported that there would have been expense involved in carrying out the recommendations they received which would have cost a patient amounts

ranging from \$1.50 to \$985.00. For one-third, the expense was under \$25; for another third, it was between \$25 and \$50; and for the remaining third, it ranged from \$60 to 985, with three cases over \$200.

THE DOCTOR'S FEES

While certain fees are customary for the majority of the Brooklyn doctors, there is considerable range in some cases in the fees charged by different doctors for the same type of service, and a physician may exercise a wide latitude in determining his fees according to his individual point of view. The usual rates for office and home visits are \$2.00 and \$3.00, respectively, for general practitioners; \$5.00 and \$10.00 for specialists. Some specialists, however, charge less and some general practitioners charge more than this. The lowest rates found were \$.50 and \$1.00, and the highest, \$15.00 and \$25.00. For operations the fees ranged from \$50.00 to \$500.00; for consultations, from \$25.00 to \$100.00.

The results of the questionnaires seem to show that the doctors of Brooklyn wish to adjust their fees to their patients' means, and that while they desire to take initiative, they have no consistent or reliable method of learning their patients' circumstances. Most of them rely upon information from other doctors in a fairly small proportion of their cases. In the majority of cases, they are guided by considerations that happen to come to their attention in a more or less accidental way.

The interviews left the impression that the doctor has a generous attitude toward his patients and a desire to help those of small means through their periods of illness, and that he has many recollections of treatment given free or at much reduced rates. For this reason he is led to believe that the needs of people of moderate means are being met. He feels that he is making a reduction to patients who need it. He does not realize that in many of his cases he does not know whether or not the patient needs it.

Only four of the sixty-two doctors who replied to the questionnaire said they did not adjust their charges to the patients' means. Fifteen said they did so "sometimes" or "in some cases." Forty-three per cent inquire into the patient's circumstances; 79 per cent ask his occupation; 45 per cent ask about his responsibilities. Seventeen per cent make a practice of asking the patient's income; 57 per cent said they left it to the patient to volunteer information of this sort, and another 21 per cent said they sometimes did so.

Requests from other doctors for reduction of fees are received by 75 per cent, but half of the number said this occurred in five per cent or less of their cases, and only nine doctors said it occurred in one-half or more of their cases. Seven per cent leave it to the patient to request a reduction. A system of adjusting charges for operations is followed by forty per cent. Fees are never raised because of the patient's comparative wealth, by 30 per cent, and by 70 per cent, are raised in not more than 5 per cent of their cases. Ten doctors said they raised their fees in from 7 per cent to 25 per cent of their cases.

Among 63 per cent, reductions of fees are made for all forms of service; for special treatments only, by 22 per cent. In cases of long continued treatment, 80 per cent said they made reductions. In 16 per cent of the actual cases reported, a reduction of fees was noted, and an increased fee in 2 per cent.

The method of determining charges for operations seems to be entirely different from that used in deciding other fees. For most services, each doctor has a fixed fee from which he departs only for a special reason. For operations there is no fixed fee, although each surgeon usually has a range beyond which he does not go. He finds out something about his patient's circumstances and selects the fee that seems suitable. Some doctors are guided by the type of hospital room the patient occupies, from which they infer his circumstances; others charge a certain percentage of his income; while others find out his income and the size of his family and estimate what he is able to pay.

There was a general feeling among the doctors interviewed that a great disparity exists between the fees of specialists and general practitioners. This question would naturally receive much attention, since Brooklyn is peculiarly a city of general practitioners. The fact that the proportion of general practitioners is higher in Brooklyn than in similar communities is shown by figures taken from the American Medical Directory for 1925. A symbol indicating specialty is entered after the name of a physician at his request and an asterisk is added to the symbol when the physician states that his practice is limited to that particular branch of medicine. Without the asterisk the abbreviation designating a specialty indicates that he is especially interested in that branch of medicine, but does not limit his practice to it. This information is based upon data furnished by the physicians themselves. Brooklyn in comparison with Boston, for example, where 37 per cent of the physicians are specialists, has 23 per cent who are specialists; of whom only half are exclusively specialists, in comparison with three-fourths in Boston. In two smaller cities of Massachusetts, Lowell and Haverill, the proportion of specialists is 34 per cent and 38 per cent of the entire number of physicians. In Manhattan and the Bronx, specialists number 30 per cent, of whom two-thirds are exclusively specialists.

EXPENSES FOR SICKNESS IN ADDITION TO DOCTOR'S FEES

The Illinois Health Insurance Commission, in a study of Chicago wage-earning families in 1919, found that the total amount spent for medical care was about twice the amount paid to physicians. The average spent per family among all the 12,000 families included in this study, was \$60 a year, for all forms of care of sickness. Out of this total of \$60, the average spent for the services of physician, surgeon, oculist and dentist was \$40, that is, two-thirds of the total amount. The remaining third, or an average of \$20 per year, per family, was spent for medicine, nursing, hospital care, eye glasses and other items. Among the items charged to medical care must be reckoned the additional cost of special feeding for infants and special

diets for both children and adults, when the expense exceeds the regular food allowance of the family.

In our cases the additional costs that were noted on the schedules amounted to over half the amount of the doctor's fees. However, medicines and expenses for nursing at home were not usually included, and it is possible that other items of expense also may not have been known to the doctors who furnished the schedules. All items in addition to fees were classified as "special services," which includes laboratory tests, all forms of examination and treatment involving unusual expense, appliances and hospital care. Such services were included in the fee in nine per cent of the cases; in fifty-one per cent there were no charges of this kind; and in forty per cent there was this additional expense. In the cases in which special services were required, the fees amounted to sixty-four per cent of the entire expenses, and the cost of special services to thirty-six per cent; that is, the additional expenses were fifty-six per cent of the amount paid in fees. The average expense for special services in the cases where it was given was \$18.50; but the average varied from \$7.50 and \$6.00 in cases of long and short duration with light expense, to \$93.00 and \$83.00 in long and short term cases with heavy expense. In view of the fact that these schedules did not furnish complete information about expenditures other than fees, it seems probable that the medical fees usually amounted to less than half of the total cost, as nursing care was rarely, medicine almost never and hospital charges not often mentioned.

Among 12,000 families included in the Labor Bureau statistics, some expenditure for medicine occurred in 92.3 per cent of the families; for nursing in 12.8 per cent; for hospital care in 10.7 per cent; for eye glasses in 20.6 per cent; while expense for a physician occurred in 86.2 per cent and for a dentist in 46.3 per cent.

SUMMARY

The comparatively small amount of data on different aspects of the problem of medical costs in private practice which was obtained in this study does not warrant definite conclusions. The data must be regarded merely as suggestive. The indications seem to be that in many cases under private medical care in Brooklyn, the cost of sickness is a considerable burden when measured against the amount available for that purpose in any one year in the average workingmen's family of five, where the family income falls below \$2,500 or even \$3,000; that medical fees are fairly uniform for the majority of doctors, but vary considerably among a number of them; that the practice of reducing fees prevails generally but is not based upon any reliable method of ascertaining the patient's ability to pay; that reduction of fees appears to occur in less than one-fifth of all cases; and that professional fees amount to less than one-half of the total expenditures for sickness.

SUBJECTS FOR FURTHER INQUIRY

The subject of costs in private medical practice is so extensive and so complex and at the same time of

such importance, and the material of this study is so slight, that consideration of the problem to the extent to which the committee was able to go suggests the need for further investigation.

It is of interest to review some of the reasons given by the physicians who were interviewed for wishing to see further study of the problem. Some said that the doctor is in need of some method to guide him in regulating his fees. Only five doctors said definitely that adjustment of fees was not a problem in Brooklyn. Others, who had not thought of the matter before, said that they recognized the need for a more definite method. Another reason given was the belief that there is a great disparity between the fees of specialists and of general practitioners. It was said that specialists have less opportunity to know their patients' circumstances than the general practitioners. Other reasons given for further study of the subject were as follows: patients sometimes pay large sums for medical care when they cannot properly afford to do so; the patients who ask for reduction of fees are not necessarily the ones who need it; thrifty families, especially among the foreign-born bear the expense, while other families with equal means, do not; people who should be able or are able to pay for private care go to the out-patient clinics; sometimes the doctors do not recommend the special examinations and treatment that they desire because their patients cannot afford to pay for them.

Suggestions for further study mentioned by some of the physicians in the interviews included studies of the use and abuse of out-patient clinics; of lodge and insurance systems of medical service; of conditions in different districts of the city; of eye examinations of school children at free clinics with reference to their parent's ability to pay for a private examination. The possibility was suggested of carrying the present study further by asking the doctors who furnished the schedules of cases to ascertain the full amount expended by their patients for the illnesses described. It was also suggested that a special committee of members of the Society might be asked to review the schedules.

The committee believes it is obvious that further definite study should be undertaken to consider the feasibility of providing some less expensive means of securing nursing care, obtaining laboratory and special therapeutic service.

It will appear equally obvious that existing hospital and dispensary facilities should be available to the medical profession for their patients, so safeguarded that the personal relationship of doctor and client would not be disturbed and so conducted that the cost would materially reduce the total expenditure for sickness without the sacrifice of the physician's fee.

THE COMMITTEE ON DISPENSARY DEVELOPMENT NEW YORK CITY

Note:—Inquiries, comments and suggestions from those interested in this article and in other matters concerning out-patient service are invited, and should be addressed to the Executive Secretary, Michael M. Davis, 17 West 43rd St., New York, N. Y.

Book Reviews

THE X-RAY IN EMBRYOLOGY AND OBSTETRICS. By W. A. Newman Dorland, A. M., M. D., F. A. C. S., and Maximilian John Hubeny, M. D., F. A. C. R., F. A. C. P., St. Paul, Minn. Bruce Publishing Co. 1926. 420 pages with 259 illustrations. 8 vo. Cloth \$10.00.

This beautifully illustrated volume is the only book of the kind in existence. It is filled with interesting and valuable information not to be found elsewhere. The authors have omitted nothing to make it a complete reference book upon the subject. The magnificent plates make it of great practical value to the surgeon and obstetrician. Especial attention is called to the X-ray diagnosis of pregnancy and of pelvic contraction, both of which subjects are presented fully. Not only is the book of incalculable scientific value but its practical application to the surgery of the various portions of the body should not be underestimated. We recommend it to every practitioner of medicine as a book that should be included in his library.

THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume VI, Number III (Chicago Clinic Number—August, 1926). 324 pages with 101 illustrations. Per Clinic year (February, 1926, to December, 1926). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London. W. B. Saunders Company.

Contributors to this number are Edmund Andrews, Bevan, Blaine, Brams, Christopher, Loyal Davis, Dias, Greenhill, Hedblom, Kanaval, Koch, Koucky, Kreuscher, Lounsbury, Matz, Meyer, McNealy, McWhorter, Vincent J. O'Connor, Palmer, Seed, Starr, Stein, Bernstein, Bettman, Isendraith.

THE MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month. Vol. X, Number II (Philadelphia Number, September, 1926). Octavo of 217 pages with 16 illustrations. Per Clinic year, July, 1926, to May, 1927. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London. W. B. Saunders Company.

The contributors to this number are, Doctors Bockus, Boles, Giddings, Gordon, Jonas, Keeler, Klein, Knowles, Lundry, Lynch, Rehffuss, Riesman, Robertson, Sailer, Shay, Stokes, Stroud.

OUR DOCTORS, A NOVEL OF TODAY. By Maurice Duplay. Translation and preference by Joseph Collins. New York and London. Harper & Bros. Publishers. 1926. Price \$2.00.

This is a French story of medical life which is enjoying a very large sale in France. The author is the son of a French physician. No other novel of recent times has disclosed with such frankness and with such dramatic power the sinister forces with which the sincere and incorruptible scientist must

struggle in practicing medicine. The scene is Paris but the story is universal—a story of love and passion, of a great surgeon struggling to master the secret of a dread disease and of the tragedy which in the end crushes him.

ABSTRACTS OF THESES. Science Series. Vol. II submitted to the faculties of the graduate school of the University of Chicago for the degree of Doctor of Philosophy. August, 1923-June, 1924, with abstracts of some theses of an earlier date.

Volume II of this valuable new series is a record of significant work in a variety of scientific fields.

MODERN CLINICAL SYPHILOLOGY. By John H. Stokes, M. D., Professor of Dermatology and Syphilology in the School of Medicine, University of Pennsylvania; Professor in the Graduate School of Medicine, University of Pennsylvania. Octavo of 1,444 pages with 885 illustrations and text figures and more than 200 detailed case histories. Philadelphia and London. W. B. Saunders Company. 1926. Cloth \$12.00 net.

This work is intended as a text book. The material of the book is to a large extent original. Many of the statements and, in fact, whole chapters are based on interpretation of cross sections from actual practice, ranging in number of 40 to 500 cases each. In this work the subject of clinical syphilology is brought strictly up-to-date. We highly recommend this work for which it is intended.

CAVERNOUS SINUS THROMBOPHLEBITIS AND ALLIED SEPTIC AND TRAUMATIC LESIONS OF THE BASAL VENOUS SINUSES. A CLINICAL STUDY OF BLOOD STREAM INFECTION. By Wells P. Eagleton, M. D. New York. The MacMillan Company. 1926.

This work is primarily a study of 25 personally observed cases of cavernous sinus thrombophlebitis with twenty-one deaths (twelve autopsy reports) and four recoveries, three of which were verified by operative findings.

PLASTIC SURGERY OF THE HEAD, FACE AND NECK. By H. Lyons Hunt, M. D., L. R. C. S. (Edin) illustrated with 342 engravings and 10 colored plate. Lea & Febiger. Philadelphia and New York. 1926. Price \$7.00.

In this work the author has presented in detail the operation he has devised for the relief of physical imperfections. There are chapters with a description of surgical anatomy. This is followed by a study of the condition and the fundamentals which underlie its operative relief. Each chapter is concluded by the application of principles and methods to the relief of cosmetic conditions.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical pro-

fession throughout the world. Edited by Henry W. Cattell, M. D. Volume III, Thirty-sixth series. Philadelphia and London. J. P. Lippincott Company. 1926.

The contributors to this volume are Doctors Ralph Boerne Bettman, Louis Faugeres Bishop, Edward Binswanger, Oswald Bunke, Henry Cattell, Frederick Christopher, L. Pierce Clark, Coursen, Baxter Conklin, William Fleming, Henry F. Harris, Julius Hess, W. R. Hess, Moses Keschner, E. Bosworth McCready, S. Hanford McKee, M. Minkowski, N. Philip Norman, Matthew White Perry, Stanley Reimann, Francis Richardson, Sir Humphrey Bart, Rolleston, Nathan S. Schiff, Herman Selinsky, L. Snellbaker, Reverend Francis Spellman, Domenico Taddei, L. B. Wilson.

THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume VI, Number IV (Mayo Clinic Number—October, 1926). 274 pages with 91 illustrations. Per Clinic year (February, 1926, to December, 1926). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London. W. B. Saunders Company.

The contributors to this number are Doctors Balfour, Bollman, Craig, Decker, Desjardins, Figi, Harrington, Henderwon, Higgins, Hunt, Johnson, Judd, Lillie, Lumdy, McIndoe, Mann, Masson, Charles Mayo, William Mayo, Meyerding, Morse, New, Parker, Pemberton, Powell, Sheard, Sistrunk, Stark, Synhorst, Thompson, Walters, Williamson.

HYGIEIA. OR DISEASE AND EVOLUTION. By Burton Peter Thom, M. D. New York. E. P. Dutton & Company. 1926.

This book presents a sane heartening study of disease which will go far to dispel the fear of it and to demonstrate its constructive contribution to the evaluation of the race.

What disease really is, its vast importance as a factor in the survival of the fittest, how man will eventually become immune from it, are a few of the interesting phases which the author treats in this fascinating study.

A PRACTICAL MEDICAL DICTIONARY. By Thomas Lathrop Stedman, M. D. Ninth revised edition. Illustrated. New York, William Wood & Company. 1926. Price \$7.50.

In this edition much revision has taken place, several hundred new titles have been introduced. Numerous changes have been made in order to conform to the new editions of the U. S. Pharmacopoeia and national formulary. An alphabetical table of drugs and their indications have been added in the appendix. Many plates have been distributed through the body of the work so as to be more directly of service in supplementing definitions.

THE ENDOCRINES AND BLOOD PRESSURE. By Henry R. Harrower, M. D. Glendale, California. The Harrower Laboratories, Inc., 1926.

This little cloth bound, 224-page book is offered gratis to physicians. In this work the author shows that the relation between the glands of internal secretion and variations in the arterial tension is more important than had been previously supposed.

DEFECTIVE MEMORY, ABSENTMINDEDNESS AND THEIR

TREATMENT. By Arnold Lorand, M. D. Philadelphia. F. A. Davis Company, 1926. Price \$3.00.

In this work the author points out the intimate relation which exists between bodily functioning and mental activity and shows the relation of glands of internal secretion to the proper functioning of the brain cells and points out how memory may be much improved through the increased activity of certain organs, and by the removal of the disturbances in their functioning. PRACTICAL DIETETICS FOR ADULTS AND CHILDREN IN

HEALTH AND DISEASE. By Sanford Blum, M. D. Second revised edition. Philadelphia. F. A. Davis Company, 1926. Price \$4.00 net.

This work has been enlarged by the inclusion of additional dietaries. Chapters on dietetic procedures in connection with Roentgenological examinations and on the technique of nutritive enemata have been added. All recently acquired knowledge has been applied in revising special diets in this book.

SURGICAL TREATMENT OF GOITRE. By Willard Bartlett, M. D., with a foreword by Dr. Charles H. Mayo. 130 original illustrations. St. Louis. The C. V. Mosby Company. 1926. Price \$8.50.

This monograph is intended as a study in detail of the elaborate procedure involved today in the preparation, operation and after care of the goiter patient in the author's clinic. It will prove of great aid to the young well trained general surgeon who is inclined to broaden his experience in the special field of thyroid surgery.

A PRACTICE OF PHYSIO-THERAPY. By C. M. Sampson, M. D. With 146 Illustrations. St. Louis. The C. V. Mosby Company. 1926. Price \$10.00.

The demand for a scientific work on physiotherapy has been both insistent and emphatic. This work is therefore very timely. It will help materially in clarifying the public of the flood of misinformation circulating throughout the world pertaining to the value of this form of treatment.

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING WITH ILLUSTRATIONS. By Oscar W. Bethea, M. D. Fourth revised edition. Philadelphia. F. A. Davis Company, 1926. Price \$4.50 net.

In this edition the text has been made to conform with that of the U. S. P. This has necessitated the addition of much new material and many changes in the matter relating to drugs formerly included. Many drugs have been omitted that have fallen into disuse.

Original Articles

MODERN TREATMENT OF GOITER— TOXIC AND NON-TOXIC*

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The advance of scientific knowledge frequently leaves those of us who devote most of our time and energy to the care of sick people with a feeling of inadequacy and even of bewilderment. New methods, new terms, new instruments and new drugs sweep in and perhaps sweep out again before we find out what they are all about. At any given time, then, it is of value to pause and "shoot the sun" as the sailors say, take our bearings, find out where we stand so that we may properly steer our course in the most approved method. It is with this idea in view that I wish to bring before you today a subject which is far from finished and, if possible, present those facts to which we may hold with a reasonable degree of confidence.

In classifying non-toxic goiters we have** (a) Simple hypertrophy, (b) Colloid goiter, (c) Non-toxic adenoma.

The first class, simple hypertrophy, includes moderate symmetrical, diffuse enlargement of the thyroid gland occurring in young individuals, usually girls, very often before or during puberty.

This variety is probably an exaggerated form of the normal swelling of the gland seen in healthy women during pregnancy and lactation. In these individuals it may be satisfactorily controlled by small doses of iodine (Potassium Iodide gr. iii a day for several weeks) or may better be prevented by prophylactic measures such as those used so convincingly by Marine¹ in Akron, Ohio. Should the enlargement fail to respond to this form of treatment small doses of desiccated thyroid gland (gr. 1.5 b. d.) may be tried, often with success. The condition is mild and never alarming and should not lead us into the error of too radical or too violent therapeutic efforts.

Colloid goiter occurs in young adults and persists into old age if not treated. This particular enlargement may assume tremendous proportions and swellings reaching down to the umbilicus

have been described. Pressure on the trachea, blood vessels, recurrent laryngeal nerves or mediastinal contents may cause symptoms necessitating interference, or failing these, the growth becomes so unsightly that the patient seeks medical aid. Iodine (m. v. t. i. d.) usually will effect a definite reduction in the size of these glands but the amount of shrinkage is often slight and some reported cases of hyperthyroidism occurring during and thought to be invoked by this method of treatment make it inadvisable. These glands are said to diminish rapidly under small doses of desiccated thyroid gland (gr. 1.5 t. i. d.) (Boothby)² but usually recur when the administration of thyroid gland is discontinued. The treatment of choice in cases of this kind is surgical removal of the colloid tumor, care being taken to leave as much of the normal thyroid tissue as is available along with the four para-thyroid bodies.

Any benign, non-inflammatory localized swelling of the thyroid gland not associated with signs of hyperthyroidism is usually spoken of as a non-toxic adenoma. These tumors may consist of localized colloid areas, of cysts filled with colloid or degenerative fluid, or of encapsulated or non-encapsulated collections of cells which present a histological picture which may vary from normal thyroid cells to cells looking like fetal thyroid cells. From external examination alone it is frequently impossible to differentiate accurately between these various forms of benign tumors. Medical treatment may cause a reduction in the size of these nodules but it is in this form of thyroid swelling that we hear from all sides of the dangers of the administration of iodine. Recently a series was reported by Jackson³ from Madison, Wisconsin, of 50 cases of iodine hyperthyroidism occurring in patients who received iodine as treatment for non-toxic thyroid adenomata. In the Journal A. M. A. for May 1, 1926, an article by Hartsock⁴ from Dr. Crile's Clinic sets forth the ever increasing number of cases of iodine hyperthyroidism occurring mostly in men. Until we learn more along these lines we must observe these warnings and never give iodine to patients whose thyroid contains non-toxic adenoma. On the other hand many writers, Graham, Wilson, et al., point out that it is in this variety of goiter that the greatest numbers of cancerous changes develop. A safe rule of procedure in regard to tumors in the thyroid gland,

*Read before the Section on Medicine, Illinois State Medical Society, Champaign, May 18, 1926.

**Not to mention the malignant growths of the thyroid gland and the rare infections of the thyroid gland such as syphilis, tuberculous and pyogenic infections.

then, is to remove them all surgically. If the patient is unwilling to undergo this operation he should be told of the possibility of hyperthyroidism developing and also told that if these tumors begin to show signs of malignant change (rapid growth with sudden enlargement or change in consistency) they must be removed. Long continued mild hyperthyroidism which may even escape detection is thought to produce serious⁴ myocardial damage and this adds further weight to the policy of surgical treatment.

Of the toxic goiters three fairly well defined clinical groups are differentiated: 1. Exophthalmic goiter, 2. Hyperthyroidism (toxic adenoma), 3. Iodine hyperthyroidism.

I am forced to turn to the literature for all my information in regard to iodine hyperthyroidism as we rarely if ever recognize this clinical entity in Baltimore, Jackson,³ Hartsock⁴ and others working in goiterous regions are reporting many cases of this kind. The picture is said to be characteristic; onset with great weakness and loss of weight followed later by nervousness, tachycardia and mild exophthalmos. Unlike other forms of goiter these cases occur largely among men and between the ages of thirty-five and forty-five years. In the mild cases discontinuance of the iodine and medical rest in bed suffices to produce a cure. In the more severe cases subtotal thyroidectomy may or may not produce satisfactory results. It is interesting to observe that pathological studies of the glands in these cases have usually failed to reveal evidences of hyperplasia of the acinar-epithelium and the colloid is present in abundance as in glands from cases of exophthalmic goiter which have been treated with iodine and in simple colloid goiter.

Concerning the treatment of the group of cases commonly spoken of as toxic adenoma of the thyroid or nodular goiter with hyperthyroidism there exists little if any difference of opinion. Surgical removal of the adenomatous area or areas of the gland have yielded universally satisfactory results. This procedure does not insure against recurrences but it does offer excellent hope of cure of the existing disease. Most writers believe that the adenomatous portion of the gland is responsible for the symptoms and state that when possible the simple shelling out of the adenoma terminates the disease. There are those, however, who suspect that the adenoma-

tous tissue may not secrete the poisonous substance and these individuals think the operation acts very much as any partial lobectomy would by interrupting the vicious circle and allowing the gland as a whole to regain its normal equilibrium when the pathological tissue (and probably some neighboring hyperplastic gland substance as well) has been removed. At the moment, however, our attention is directed toward therapy rather than etiology and we may safely say in this respect that here surgical interference is strongly indicated. In preparation for operation absolute rest, mild sedatives, adequate diet and appropriate cardiac medication are helpful. From the preoperative administration of iodine (Lugol's solution, m. x., three times a day) we have seen no harmful effects in cases of this kind and frequent cases so diagnosed have been greatly benefited by its use. We have therefore advised its use in this manner in all cases where the degree of toxicity constitutes a distinct surgical hazard. In such cases the elevated basal metabolic rate has shown a reduction under iodine administration equivalent to that usually seen in cases of exophthalmic goiter. Given over a short period of time, one to two weeks, iodine has not been shown to be deleterious to cases of nodular goiter with hyperthyroidism.

The treatment of exophthalmic goiter has long occupied a prominent position in medical discussions and even today one may find many differing schools of thought. Before the advent of modern surgical technique medical methods bore the brunt alone and a great many drugs have been given a trial. Iron, quinine and strychnine, belladonna, opium, digitalis, iodine and bromide have been used with an amount of success which varied with the individual patient. All physicians have emphasized the necessity of protracted rest in bed away from nervous irritants and worries and with abundant diet which is rich in carbohydrates and low in proteins (40-50 gms. of protein a day). Mild sedatives have been useful. Today this form of treatment has been called "Skillful Neglect"⁵ and is the method preferred in some Clinics (Mount Sinai). Many cases so treated recover or at least undergo a more or less spontaneous remission. Critics of this method point out that the length of time required for the rest in bed, and the expense attending its proper accomplishment make this treatment economically unsuited to any but the

wealthy. They also point out that some patients present a picture which is too severe to permit of such treatment and that these patients die unless radical measures are promptly resorted to. Similarly it is believed that when the thyroid gland is left intact recurrences are more frequent. Sturgis⁶ has recently reported six recurrences over a period of fifteen years in a patient who finally succumbed to myocardial failure which was thought to be the result of long sustained thyrotoxicosis. Medical treatment alone may be evaluated as useful in mild and moderately severe cases which refuse to undergo an operation.

For 40 years partial thyroidectomy has been a surgical procedure which has gradually been improved until today competent thyroid surgeons remove the thyroid gland with less danger to the patient than from most other operations. In the early days of this operation it was thought sufficient to remove a small portion of one or the other lobe; today most thyroid surgeons believe that every case of exophthalmic goiter should have nearly all of the pathological gland removed. The usual technique is to leave only a small amount of thyroid gland the size of the terminal phalanx of one's fifth finger on each side (the four para-thyroid glands are also left).

Gilman⁷ has gone so far in this direction as to advocate the removal of the whole gland since he believes that leaving even a small portion of diseased tissue has its dangers, the greatest of which is recurrence. This method is too recent to have received satisfactory trial as yet but it has several evident draw-backs. In the first place total thyroidectomy causes myxedema which requires the constant and continuous administration of desiccated thyroid gland or thyroxin—the correct amount of which varies for each patient and may be accurately controlled only by frequent basal metabolic rate determinations. It is known that there occur such cases in which thyroid extract and thyroxin are not absorbed from the gastrointestinal tract. Such patients would then be forced to the permanent daily hypodermic injection of thyroxin. Secondly, the technique of total thyroidectomy without the unintentional removal or damage of the para-thyroid glands is by no means easy. If all the parathyroid bodies are destroyed fatal tetany results. It seems clear, however, that even in mild cases of exophthalmic goiter most of the gland should be removed. Cases in which this form of surgical treatment

has been carried out have usually presented a normal basal metabolic rate when checked up one or two years after operation. In extremely toxic cases it has been the custom of careful surgeons to perform thyroidectomy in multiple stages, first ligating one or more of the thyroid arteries and next proceeding cautiously to remove the gland substance in several stages. This method of extreme caution is rarely necessary since the pre-operative use of iodine has been introduced. It may still be applicable in that unusual case which does not react satisfactorily to iodine.

Following the demonstration of the destructive power of the x-ray and radium many attempts have been made to perfect this means of quieting the over active thyroid gland. Means and Holmes⁸ have made an excellent and well controlled study of the x-ray treatment of exophthalmic goiter and they conclude that it is a method of distinct value. They point out, however, that glands which have been treated by x-ray become friable and bound down by adhesions and therefore that this method should not be used in any case where subsequent surgical procedures are contemplated. They believe that the results are not so good as those obtained by surgical removal of the gland but that in cases where operation is refused x-ray offers a fairly hopeful substitute.

Following the work of Plummer⁹ which was published in 1923, the pre-operative use of iodine in exophthalmic goiter rapidly gained universal acceptance. Given in the form of Lugol's solution (m. x three times a day or in even larger doses) a striking improvement occurs in the great majority of cases in from one to two weeks. This improvement is evidenced by a gain in weight, a slowing of the pulse rate, a remarkable subsidence of the nervousness and restlessness and by a fall in the basal metabolic rate which often reaches normal limits. With this aid the operative mortality has been reduced to a negligible quantity. In a series of cases recently studied at the Johns Hopkins Hospital¹⁰ 50 per cent. showed a reduction of the basal metabolic rate to within normal limits. The maximum iodine effect was obtained in this series in an average of 11.8 days although in three cases the full effect was not obtained until between the twenty-first and twenty-fifth day. Rienhoff¹¹ has shown by pathological studies of the gland from exophthalmic goiter patients before and after

iodin administration that this effect is obtained by, or at least simultaneous with, a change in the substance of the thyroid gland, the gland reverting from a hyperplastic condition to a quiescent colloid state (slides). Sturgis⁶ has urged the continuance of iodin administration for at least three weeks after operation, but we have found this unnecessary when the surgical technique includes the removal of all but two small fragments of thyroid tissue, since these fragments are also in a quiescent state from the effect of the iodin given before operation. Iodin alone has not been shown to be sufficient to suppress the disease permanently and its quieting effect on the toxic symptoms is gradually lost after one or two months administration.

Crile,¹² more than most surgeons, has emphasized the advantage of the combination of medical and surgical treatment and he has laid particular stress on the importance of the after care of the patient. The responsibility of the case does not end with successful healing of the operative scar even though it be a beautiful hair-line scar. It is essential that the patient should continue on a course of physical training which avoids fatigue, nervous excitement and worry and insures a gradual development of muscular strength without overtaxing the weakened heart muscle.

McCarrison¹³ believes the hygiene of the gastro-intestinal tract to be of prime importance on the theory that imperfect drainage of the bowel causes conditions which may produce goiter and he also believes all drinking water should be boiled to prevent ingesting goiter-causing bodies. These measures are easily followed even though their theoretical basis is not as yet established.

The cardiac complications of hyperthyroidism frequently require especial attention. Auricular fibrillation (paroxysmal or continuous) is the form most commonly encountered. Proper control of the cardiac condition before operation is essential. It is important to remember that the state of the heart is a result of thyrotoxicosis and that digitalis alone may fail to produce satisfactory results. Iodinization in combination with digitalization, however, may serve to cause a reversion to normal rhythm. In a few cases Foster¹⁴ has found it necessary to use quinidin to effect an interruption of the auricular fibrillation. Caffein, and other such cardiac stimulants

should not be used. Cases in which the auricular fibrillation is of recent occurrence do well, those in which the cardiac picture is of long duration and is, in fact, the presenting symptom, do less well even though the basal metabolic rate is relatively low. One sometimes encounters a post-operative paroxysm of auricular fibrillation but this rarely persists for more than one day. One finds oneself convinced, then, both from personal observations and from careful consideration of the reported results from many clinics, that surgical removal of most of the abnormal thyroid gland (subtotal thyroidectomy) combined with judicious pre and post-operative medical measures including the use of iodin, is the form of treatment which offers most hope of satisfactory results in cases of exophthalmic goiter.

Conclusions

Satisfactory treatment of goiter, toxic and non-toxic, requires the close cooperation of a trained thyroid surgeon and an internist. Careful medical examination and treatment, pre-operative and post-operative, render important aid to the proper surgical procedure.

The prophylactic use of iodin for school children in goiter regions should be encouraged.

Iodin plays a prominent role in the pre-operative treatment of toxic goiter but should be avoided or used with great caution in other ways.

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(Discussed with Dineen paper.)

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CARDIAC MANIFESTATIONS OF GOITER*

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There has long been a fear throughout the profession to approach the goiter heart. Among men who are doing much work with goiter, there is a common saying that nothing good has been written upon the subject. So, I am making my pre-emptory apologies.

Following the increased knowledge in regard to goiter, which has developed in the last ten years resulting in its more frequent recognition, we are beginning to believe more and more that goiter is the most common cause of heart disturbance. Previously these hearts were classed under such terms as neurasthenic hearts, neuro-circulatory asthenia and various other meaningless names. In other words, when you can find no other cause for abnormality of cardiac action, do not rule out goiter as the cause until you are absolutely sure, after long observation, that there is no influence from the thyroid gland. We must remember that the heart is the loud speaker of goiter; that if it were not for the cardiac symptoms very few goiter patients would present themselves.

As the profession has come to recognize the color of pernicious anemia or the emaciation of cancer or the skin in kidney conditions and yet are not able to describe the differences to a medical student or a fellow practitioner, so it is with the sounds of the heart. After one has listened to a good many thousand goiter hearts, one acquires a recognition of a peculiarity of the heart sounds. This peculiarity may perhaps be described as metallic, and yet the inexperienced would be unable to recognize it. There is also a peculiarity of murmur that occurs in the pulmonary and aortic areas which does not have the auditory characteristics of an infective endocarditis and is also different from the anemic type of murmur.

The goiter heart characteristics depend upon the individual, upon the type of goiter and upon the duration. All of which may be modified by other cardiac pathology.

The main problem in goiter surgery is not so much the ease with which a goiter can be re-

moved, not the degree of hemorrhage, not the so-called post operative acute thyrotoxicosis; but whether or not the heart will stand the shock of the operation. That is the most important part in many respects of goiter work. Upon this depends the mortality rate. The number of deaths also depend upon the post operative care of the heart. The simple colloidal types of goiter have no death rate; the death rate increasing only in proportion to cardiac disturbance. The so-called post-operative acute thyrotoxicosis with a production of a high temperature, increased nervousness, irritability, sleeplessness and restlessness will pass off in the course of twenty-four to forty-eight hours following its development providing the heart lasts through it. Under this condition the heart takes on a very great increase in strength in ventricle contractions along with rapidity. The main thing is to prevent the heart from tiring out. When the patient in all types of goiter complains of exhaustion and fatigue, remember that the heart muscle is in identically the same condition as muscles with higher sensory nerve developments.

Due to the fact that I have seen every evidence of cardiac disturbance disappear under partial and rarely total thyroidectomy, I am more inclined to believe that the vast majority of cases do not acquire permanent or organic changes within the heart, but that they are more or less transitory, depending upon the removal of their cause or effect. For that very reason, we prefer to speak upon cardiac manifestations of goiter rather than upon the cardiac complications of goiter. Were the changes organic, as is maintained by some men, then the murmur would persist, the tachycardia or irregularity would tend to persist and the blood pressure findings would also remain.

In regard to the size of the heart, I can truthfully say that the majority, when uncomplicated, show very little or no change in size, and this disappears in the course of six months following operation.

The most common early announcement of mal thyroidism is a rapid heart. This rapid heart at first is only transitory, the patient noticing it upon excitation or exertion. With the passing of time the tachycardia tends to persist until it remains constant, rest in bed having only a very little effect.

The next stage in this progression is the pal-

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pititation. This is more of a subjective side than an objective. One may very easily see the rise and fall in the chest wall. During a period of quiescence, which is undoubtedly due to a lowering of mal secretion from the thyroid, the palpitation disappears. It is during the stage of constant tachycardia that the peculiarity of these heart sounds are first noticeable.

As time goes on the heart muscle apparently begins to lose its true force, also its rhythm and regularity. Starting sometimes with a pulsus bigeminus or sometimes with a pulsus trigeminus, it goes on to an irregular pulse characteristic of auricular fibrillation. An auricular flutter may also take place. This irregularity is always rapid. The dyspnea associated with this irregularity is not as severe as the dyspnea with a similar irregularity due to mitral disease, but the changes in the contraction of the ventricle are greater.

The heart responds very well to digitalis and rest in bed, but the slightest exertion soon destroys all of the improvement. Occasionally the irregularity will disappear all together, but each contraction of the heart muscle will be variable in force, as can be told with the sphygmomanometer. Under prolonged rest in bed the improvement may completely disappear. During the period when the heart has slowed down, the case becomes a safer operative risk.

While this is the most common type of cardiac disturbance, the blood pressure changes are the most constant, although these changes are very variable. It is not safe to make a diagnosis of toxic goiter without some alteration in either systolic, diastolic or both. We, of course, recognize the exophthalmic type with changes that are somewhat analogous to aortic insufficiency whereby there is a marked increase in systolic pressure and a decided decrease of diastolic. If this were the only change found in goiter cases, they would be easy to classify, but we also have the type that is very similar to ordinary hypertension whereby there is a marked increase of both systolic and diastolic. Personally, I believe that these patients complain of palpitation more than any other type of goiter. With the removal of the offending portion of the gland, we see the blood pressure reading return within normal limits.

Then we will find the heart with the systolic

pressure about normal and a marked decrease of diastolic. The pulse pressure is high. The palpitation is complained of to a less extent than in the other two types. The tachycardia is very often extreme in these patients and the tremor more noticeable.

There is a group that has remained more or less enigmatical to me and that is where the systolic pressure is low and the diastolic normal. Palpitation is rare in these cases. Exhaustion and weakness is the more frequent complaint. What is the depressant effect upon the heart? Is it due to an idiosyncrasy of the individual or is it due to some peculiar substance secreted by the gland? I believe that the later is the best suggestion. Digitalis has little or no effect upon these cases. Strychnia has little influence. Iodin is of no value. X-rays have been negligent. The gland itself has more of a resemblance to the colloid type both microscopically and macroscopically. Following the removal of the diseased portion of the thyroid these patients improve, but it is much more slowly than with the other types. I have watched them making their slow changes covering a period of about one year. Adrenalin seems to stimulate these cases to only a very mild degree and will build them up temporarily as long as they are taking it, but this soon wears off. After a couple of weeks' time, adrenalin no longer has any beneficial action.

The occurrence simultaneously of a goiter heart with an infective endocarditis or an essential hypertension or of a nephritic heart gives rise to the greatest difficulties in diagnosis. I might say that this is a very common problem. We must remember that all exophthalmic goiters are not exophthalmic. We must never forget that all murmurs in the aortic area are not aortic insufficiencies. How then are we going to differentiate between the two and how are we also going to make a diagnosis that the two are also present? When the heart is rapid with a greatly increased systolic and lowered diastolic and the murmurs in the aortic and pulmonic areas are transmitted into the vessels of the neck and there are no changes in the size of the heart dullness or in the size of the heart under the fluoroscope, you draw the conclusion that it is an exophthalmic type of goiter. If the heart is large, especially with an increase in size of the left

ventricle, and the heart is rapid with the other findings, you must first eliminate an early broken compensation due to the aortic insufficiency. This is best done by rest in bed and digitalis with the aid of neo-salvarsan, mercury and iodine. The improvement is rather rapid in the aortic insufficiency. The type of murmur depends upon whether there is an infective endocarditis present or not. If there is the murmur is very harsh. But if the tachycardia persists after a moderate digitalization and neo-salvarsan, and the changes are palpable in the thyroid with a fine rapid tremor, it is best to remove the diseased portions of the gland and you will find it then much easier to control the aortic insufficiency.

It is not at all uncommon to have a patient come in with mitral disease and broken compensation and a goiter. Auricular fibrillation is characteristic of both broken compensation from mitral disease and toxic thyroid. When edema is absent the case is more likely one of auricular fibrillation due to toxic thyroid. When edema is present it may be the result of both. The fluoroscopic examination shows an enlarged heart, most noticeable in the right ventricle and auricle. After the improvement of the heart muscle and the disappearance of the auricular fibrillation and edema, and the heart remains rapid, the offending portion of the gland should be removed. This is undoubtedly a case of toxic thyroid superimposed upon an old mitral disease. The question of history of infection does not carry the same weight of differential diagnosis in these cases as one might suppose, because in our experience toxic thyroid is very prone to follow acute infections, such as red sore throats, influenza and rheumatism, a large percentage of our cases dating their goiter symptoms to an acute infective process.

When a patient comes in past middle age complaining of choking sensation, nervousness, dizziness, sleeplessness, acute pains in the head, palpitation and shortness of breath, with or without edema, and a blood pressure characteristic of those of essential hypertension which may or may not have a broken compensation and tumor of the thyroid, you are taxed with your knowledge as to whether the symptoms are due entirely to the essential hypertension and whether or not the thyroid is undergoing some form of

degeneration. These glands are more frequently of the large so-called colloid type, having two, three, four or more large nodules. They are of increased consistency. Albumin is a common finding in the urine of these patients with a moderate number of hyaline granular casts. The heart sounds have a peculiar sound, especially over the mitral area, along with the booming aortic and pulmonic sounds. Rest in bed and digitalis give them marked improvement. In spite of this, the tachycardia persists, the edema disappears and the palpitation persists. The persistence of the palpitation means nothing in these cases because palpitation will also persist in the essential hypertension in spite of the fact that the pulse is slowed. This type of patient should not be touched until the albumin has completely disappeared and you have the pulse temporarily around eighty to ninety. This case will then go on after operation as an ordinary essential hypertension, the patient being able to do greater physical effort without another break in compensation occurring.

There is one type yet I want to mention that is not due to the toxic effect of the thyroid, but its physical existence. That is the presence of the large retrosternal thyroid which presses upon the superior vena cava producing a dilatation of the veins of the neck and upper part of the chest and when the patient is in the reclining position an edema of the neck develops which disappears upon sitting up. Asthmatic sounds are frequent throughout this chest. The dyspnea is more marked upon the reclining position and the patient prefers to sleep with about three or four pillows. Under the fluoroscope the tumor moves with swallowing. It has no pulsation and lies in the front part of the chest. Removal brings about immediate relief. Where there is also a tumor upon the left side and the right side is removed at the time of the operation, the patient very often does not return for the second operation because she feels that she has had sufficient relief from having the one side removed.

There is one type of goiter that must be watched out for very carefully. It is very deceiving. That is the one in which the patient presents herself or himself to your office with a very rapid heart or with an irregularity, and at the end of twenty-four hours rest in bed the heart settles down and becomes very slow, approaching

a normal rate and a normal rhythm. This patient is a bad surgical risk and must be prepared at least one or two weeks in advance of the operation. The heart does not withstand the shock. The least effort excites it beyond all belief from the ease with which the patient lies in bed. The slightest rest giving so much relief shows that there is very little or no reserve force in this heart.

As new fads spread from time to time, we always suffer the consequences. When thyroxin first came out we saw patients who had ordinary simple colloid goiters develop the exophthalmic type shortly after taking this drug. A great many of them quieted down when the drug was stopped, but some of them remained as exophthalmic goiters. Today we are seeing some cases of acute toxicity develop following the administration of iodine to apparently simple harmless goiters. The heart becomes rapid and exhausted, and very often is the first thing complained of by these patients. Hartsock of Cleveland reports increased incidence to the use of iodized table salt. Our experience has been along the line where they have taken iodine as simple tincture of iodine or Lugol's solution or sodium iodides for the relief of goiter. Three weeks ago, we had a mother and daughter come in, both with activated thyroids as the result of taking iodized salt.

DISCUSSION OF PAPERS—THOMAS & DENEEN

Dr. James H. Hutton, Chicago: Regarding Dr. Deneen's paper, I think we all recognize auricular fibrillation as the most important and most serious form of heart disturbance accompanying goiter. Its treatment here, does not differ essentially from its treatment in connection with other conditions except frequently the exact relation between the adenoma and the heart disease is overlooked. Quite frequently the heart will take care of itself once the goiter is taken care of.

Both gentlemen mentioned the value of after care following operation. I think that is a very important thing, and one frequently overlooked. Too often we think if these patients are operated on they are cured. And the patient has the same idea. As a matter of fact the operation is only the first step and the after care is almost as important as the operation itself. They are at least semi-invalids for a long time after the operation.

Regarding the classification Dr. Thomas mentioned, I wish he would go a little more fully into the differentiation between the simple hypertrophy and the colloid goiter. I think geography has a good deal to

do with the classification. Perhaps that is why he mentions those two types we don't mention so much here. I think the pathologists say more about that than clinicians.

We are accustomed to think of simple hypertrophy as being colloid goiter to which has been added some signs of mild hyper thyroidism. They will respond in this territory to the same measures that the diffuse colloid goiter will. That is, either iodine or desiccated thyroid. In the experience of a good many the desiccated thyroid is about as good as iodine, and perhaps safer.

I wish that the Doctor would emphasize the difference between the two. I notice he laid a great deal of stress on the difference between adenoma with hyperthyroidism and that in exophthalmic goiter. I think we can all agree with what he said about that, especially the danger of iodine in the case of any adenomatous goiter.

When we say adenomatous goiter either with or without hyperthyroidism we refer clinically to a thyroid that has a small lump in it, whether it is a lobe or part of one lobe, or the isthmus.

Iodine should be given under only two circumstances. One is as a pre-operative measure. If these people can be gotten into the Hospital where they can be properly controlled and where when the iodine has done its work they can be operated on, it is all right. But they will not all be improved by it. A certain number will be. Unfortunately we can't tell which will be improved by iodine, and which will not.

The nontoxic adenoma, of course, should never have iodine.

The prophylactic use of iodine in the prevention of goiter is a thing we might take issue with the Doctor about. It is widely advocated especially by the public health officials. I think its danger is not sufficiently understood. It is not sufficiently appreciated. It requires but a small dose in many cases to convert a non-toxic adenoma into one with hyperthyroidism.

I don't see any reason why, when this subject is so imperfectly understood, we have a right to endanger any person for the possible good that may accrue to a larger number. There is no way at this time of inspecting all school children and telling which one has adenoma and which one has not.

I feel, as a public health measure, the use of iodine ought to be condemned. I think it has value, but I think if iodine is administered to a goiter patient it should be by the family doctor, and it should be following a very careful physical examination.

Dr. E. W. Crum, Waverly: I would like to ask a question: When you place the stethoscope over the thyroid gland, and you get a bruit; is that a pathognomonic sign of exophthalmic goiter?

I would also like to know what value there is in the ligation of the two superior arteries in milder cases of hyperthyroidism? Has that ever made a cure without the radical removal of the gland?

Dr. N. C. Iknayan, Charleston: It seems that there is an unknown factor in the etiology of thyroid dis-

turbances. There are, in regions known as goitrous. cases of hyperthyroidism. These patients were born and reared in the same environment as those with thyroid deficiency. Where did they get their excessive iodine supply? Evidently we are far from having the last word on thyroid problems.

Dr. N. T. Stevens, Clifton: I would like to hear the subject of basal metabolism discussed a little more in connection with hyperthyroidism.

I remember that during the war the difference between what was called neurasthenia and hyperthyroidism was very largely determined by the basal metabolism. I have noticed in some quarters, and coming from men of authority, that basal metabolism is of no particular significance in determining hyperthyroidism.

Dr. Julius Grinker, Chicago: I want to ask the essayists if they have ever seen cases of toxic goiter develop from the use of thyroid extract as commonly presented a few years ago against obesity. Personally I have seen several such cases which developed into hyperthyroidism or toxic goiters.

Dr. Hutton made a statement that, according to his observations, the use of iodine is more harmful than that of the thyroid extract.

May I ask what is the experience of the essayists?

Dr. Frank W. Mason, Danville: I did not rise to discuss the papers which have just been gone over. I have a case on hand now which seems to me to be very instructive. Possibly when I tell about the case Dr. Thomas can give us some information.

A patient 42 years of age weighed 150 pounds about one year ago; today she weighs 116 pounds. She has a very bad heart. There seems to be a little non-compensation. The heart is enlarged, especially the left ventricle. We have this murmur that was brought out by the others in discussion at the base, and also at the mitral valve. This patient has a basal metabolism of 50 plus. There are no eye symptoms.

The gland that formerly was slightly enlarged seems to have decreased in size, although the x-ray in this case seemed to demonstrate the fact that there might be some sub-sternal enlargement.

This patient has had such severe trouble with her heart that frequently at night she would have to sit up on account of the severe dyspnea. The hands and feet would become cold. The pulse, upon exercise, would range from 100 to 140. Upon rest in bed, the pulse would come down to about 90, and become practically regular, all pulsations coming through.

As we said, the basal metabolism was 50 plus. We have some kidney involvement with hypertension, very severe hypertension, with a one plus albumin. The non-protein nitrogen in this case is 32.6. The blood pressure is 245 systolic, 135 diastolic.

The work upon the stomach and bowels shows that the stomach was all right. The patient has excellent digestion and it is shown that the head of the colon has descended, with a chronic appendicitis.

This appendix is a large concern, and the opening showing a barium shadow almost as large as a lead pencil.

This woman has also some distress in her pelvis.

The principal point I want to emphasize and to get the opinions of others on is the condition we have here of the blood pressure. 245 systolic, and 135 diastolic.

Under local, I removed her tonsils, which were imbedded, one showing considerable pus upon removal.

I still have the patient quietly in bed but we are not at all reducing the hypertension.

Dr. John E. Tuttle, Rockford: I would like to ask Dr. Deneen if he has noticed any bad effects in cases that were operated on that had been treated a considerable time before with digitalis. I wonder if those cases improved as well as those that did not have the digitalis.

I would also like to join with Dr. Hutton in his views regarding the promiscuous use of iodine as generally advocated for prophylaxis. I think it is a very dangerous procedure and one which the medical profession should call to the attention of the public. I think it should only be given in individual cases, under the direction of a physician who understands his business.

Dr. Frank O. Deneen, Bloomington: (Closing). In regard to Dr. Mason's patient, I suppose I better answer that first. That will be the hardest to answer, I would think.

I would be inclined to think he is dealing there with a toxic thyroid superimposed upon a hypertension. You can get just as much toxicity out of a retro-sternal thyroid as you can out of one up in the neck.

I would be inclined to think if you could get that patient in as good a condition as seems possible the thing would be to remove the retro-sternal thyroid. I believe that would be the safest procedure as far as the patient is concerned, although I would say his operative risk would be rather high from the description of the patient. It is the only chance that the patient has to get well.

Dr. Tuttle asked about patients having digitalis previous to operation and how well they go through with it. We give lots of digitalis. We try and digitalize practically every one where the heart is at all bad. If you have the heart in as good shape as you can get it with digitalis, they go through better.

Post-operatively we don't hesitate to use morphine to help quiet them down. We also wrap them in Turkish towels wrung out in ice water.

We believe digitalis is in many cases more beneficial than iodine.

In regard to iodine as a health measure, I believe it has suffered not so much from the fact that it does damage, but from the fact that it has been used promiscuously and has been given too much publicity and is used by the laymen without medical control.

It is not at all uncommon for a patient to come in with toxicity and heart disease and goiter who date the onset of their symptoms following the use of

Note—This patient has gradually grown worse, assuming the proportions of a rapidly progressing glomerulonephritis, with the kidney function test of one-half per cent. for first hour and one per cent. for second hour and the blood non-protein nitrogen 71.3. The urine being 1000 to 1500 C. C. With these figures we have practically a hopeless case.

iodin in some form. Frequently we have the patients come in and say they started taking iodized salt and using it upon the table because the grocer recommended it to them. Not a doctor, or anybody with any knowledge, but the grocer. And the grocers apparently are making good profits off of iodin salt, or they wouldn't be recommending it.

A bruit over the gland doesn't mean anything in the way of definite diagnosis. You can get a bruit over the thyroid in many cases of simple colloid enlargement of the gland as well as in simple enlargement. They are rather a soft goiter and you very often feel the fruits in the skin and yet there is no exophthalmus. A larger per cent have none whatever. Very often you see an exophthalmic gland where you don't get any bruit over the gland. I don't believe there is any direct relationship.

Ligation of the superior thyroid or inferior thyroid arteries, either one, is only a temporary measure in order to get the patient in a better physical condition to withstand a partial thyroectomy.

One doctor spoke of the existence of hypo and hyperthyroidism in the same territory under the same nutritinal conditions. Rarely you will see a patient with toxic thyroid condition as well as a hypothyroid condition. So it is not unreasonable to find hypo and hyperthyroidism existing in the same locality.

Basal metabolism is only one symptom if increased activity. It is not pathognomonic of thyroid disease. Anything that will produce an over-activity will produce an increased basal metabolism rate. Your technician must be very exact. We not infrequently have patients come in with a previous very high metabolic rate. When we see them they seem to have little toxicity. Again we have them come in with a previous low basal metabolic rate, and the patients have been given either thyroxin or thyroid gland. We don't know whether they were really toxic before they received it or not.

A basal metabolism test is one that is very likely to error. At the present time I notice where one laboratory advises that the patient can come in and a half hour after they come in have the metabolic rate done, and it is just as reliable as if in a hospital all night. To me there would be too many chances for error in that technique.

Dr. Grinker referred to thyroid extract producing thyroid activity. I believe we have seen several of those cases where the toxicity really developed following the taking of the thyroid extract. Which is the most dangerous, thyroid extract or iodin? We would be inclined at the present time to say iodin. No because iodin is of no value, but because of its abuse.

I believe that the big dangers in goiter are always upon the heart. And the real danger comes when we let the heart get damaged too much. The sooner you take care of a thyroid condition surgically, that is a surgical thyroid the sooner you will stop the advance of heart disturbance.

Dr. Henry M. Thomas, Baltimore (Closing): There have been a great many extremely interesting questions

brought up. To thoroughly discuss them would take far too much time, I am sure.

I wont go off into another discourse, but will try to consider the points quickly.

I was very much interested in hearing Dr. Deneen's splendid paper in which he took up the subject of the heart in exophthalmic goiter in a most comprehensive manner, and I can agree with him on everything he says.

I should like to say something about one group that he spoke of in whom the cardiac manifestations are very prominent, more so than the thyroid toxicity. In other words, the patient is primarily a cardiac patient for whom rest does great things. But the moment they start to move around at all their cardiac symptoms become prominent again.

It has been our experience that these cases occur not in the exophthalmic types but in the borderline types which are often spoken of as nodular goiter with hyperthyroidism. Digitalization and iodination do not properly control these forms of cardiac decompensation. Their only hope lies, as I think Dr. Deneen brought out, in the removal of the thyroid gland which, presumably in this group of indefinite cases is the basis for their cardiac disturbances.

I agree absolutely with what Dr. Hutton says and am very glad that he brought out some of the points. In my effort to crowd too much into one paper with the idea of going over the whole subject leaving out unnecessary factors and bringing it all together, I have evidently given the wrong impression.

We do not think that iodin should ever be used in adults as prophylactic measure. That, at the moment, seems to be the only safe platform upon which to stand. There is certainly danger in the administration of iodin to adults with or without demonstrable goiter. If they have lumps in the thyroid the danger is greater. If they haven't lumps in the goiter there apparently is still danger in the iodin administration.

In children, however, it seems to have been pretty definitely determined by large groups of cases, particularly by Marine's work, that there is perfect safety in giving iodin. This has been thought by Plummer and others to be due to the fact that adenomata do not occur in young children. Boothby, in a recent article, thinks it perfectly safe to give it to people under 21 years of age. If then in goiter regions iodin deficiency has something to do with the formation of goiter and its administration is safe in children, it seems that it is a prophylactic measure that we may still stand behind. On the other hand, it should certainly be accompanied by warnings.

Two days before I left Baltimore a school teacher came into the clinic, having taken iodin with the school children. After she had done that for about five months, a year and a half ago, following the stopping of the iodin she gradually had developed symptoms of weakness and loss of weight, and came into the clinic with definite signs of hyperthyroidism.

I would like a chance to ask Dr. Hutton if he does not think we can advise iodin as a safe prophylactic

measure in children, but not in other people. I see no reason for putting iodine in the salt. In certain towns they put iodine into the drinking water. That seems to me perfectly unnecessary where it can be properly controlled in the schools, by a definite dosage of iodine under the observation of Doctors. Whereas, if you give it to the community at large you are certain to find some people who are sensitive or hypersensitive to iodine.

Dr. Hutton asks what we mean by simple hypertrophy as differentiated from colloid goiter, and I feel that there is no particularly sharp differentiation. These are the difficult types to differentiate pathologically because we have no reason for examining them pathologically except by accident. However, there are a number of young people, usually young girls, who are sent to our clinic by the school doctors with the diagnosis of goiter. And when we examine them we find a slight enlargement of the thyroid gland. Sometimes this enlargement we think is due to the fact that the thyroid gland is placed high in the neck and that the isthmus is therefore thrown forward by its position over the trachea and is easily felt. However, with the new interest in thyroid, the school doctors have sent them in. We also see glands somewhat larger than these which subside spontaneously.

Also we note very definitely that in women during the menstrual period the normal thyroid gland becomes palpable and enlarged, and that in lactating women such a change also takes place. It is this group which we designate as simple hypertrophy. I realize that we cannot stand or fall by this differentiation. And it is probably unnecessary. However, the colloid type of gland that you see for instance after iodine administration or in an ordinary colloid goiter seems to be more of a pathological entity than these glands themselves. They are symmetrical non-toxic enlargements of the thyroid gland in which the colloid does not predominate.

I agree that the bruit in exophthalmic goiter may be heard just as frequently in colloid goiter, and therefore it is not a differential or diagnostic point in exophthalmic goiter.

I think ligation unquestionably may produce cure or remission of the disease in mild cases of exophthalmic goiter. However, remission may occur with no treatment. And it does occur with every form of treatment. And so there does not seem to me to be an excuse for ligation unless there is some definite reason for not undertaking the more radical measures. We believe that even in mild cases of exophthalmic goiter it is safer for the patient to have most of the thyroid tissue removed to prevent recurrences.

I cited as an example the case that has recently been reported by Sturgis of Boston. A man who had six remissions over a period of sixteen years, in whom finally the cardiac symptoms were the prevailing ones. In other words, damage of the heart by frequent periods of thyroid toxicity. Even though there was apparent cure or remission, the heart finally succumbed.

We believe for the moment that the sanest treatment is sub-total thyroidectomy in the effort to prevent recurrences.

The basal metabolic rate is, of course, the test for the determination of the basal metabolism. A great deal can be said. It seems to me to be like any other test. It must be taken along with the clinical picture, or this test may be misleading. It may annoy us for a long time.

We recently had a patient sent from South Carolina in whom the basal rate had been found to be plus 37 once and plus 41 the other time. We made two determinations in this case in my office. Each time they were above 35.

We put her in the Hospital, and at the end of three or four days' rest in bed we took another basal. That basal also was up. It was noticed that she was not able to breathe slowly. Her respiratory rate stayed up. We said, "breathe slowly" but her respiratory rate would stay up. Those first two basals in the hospital were also high. We felt pretty certain she must have a low rate. When she was asleep her pulse rate came down to 80. It was 120 or 140 when she was awake. We decided to try once more. We tried one more, and that test showed a rate of plus eight. The determination of the basal metabolic rate is only one laboratory test which is to be taken into consideration with the whole clinical picture, and must be made to fit in.

It is of tremendous help, however. In the cases we give iodine to we can readily tell when we have a proper iodine effect. Some take a long time; 25 days was the longest to get the effect. We had three or four basal rates in the interim and found we were getting a steadily decreasing basal metabolic rate.

We have seen several cases of clinical hyperthyroidism following the administration of thyroid extract for obesity. It is not in very wide use at present. These cases usually subsided quite promptly after the thyroid extract is discontinued but one case recently came to operation. Plummer believes that iodine will set up an activity which will not subside when it is discontinued. Whereas the activity usually does go down and stays down when you stop thyroxine. It has done so in the cases we have seen.

Dr. Tuite brings out the point of the dangers of iodine. I was very glad to hear this. We have not been able to see as many of the cases damaged by the use of iodine. We have the same iodized salt that perhaps you have here. Without knowing it, a great many households are using this iodized salt in Baltimore on the recommendation of the grocer. It seems to me that the medical societies should take a definite stand against this very dangerous form of medication as used by the grocers.

I would like to thank the Society for allowing me to come from Baltimore and talk to them about goiter, as I realize it is "carrying coals to Newcastle." I am sure that I have derived a great deal more benefit from the discussion than you have.

STREAM POLLUTION AND METHODS OF PREVENTION*

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With the growth of cities and industries throughout the country, the condition of many streams has been growing steadily worse, particularly the smaller streams in the middle west, where the flow is very small in the summer time. In the larger rivers like the Mississippi, conditions have not become acute, but in smaller streams, in the vicinity of larger cities, they have rapidly become of vital interest to the public. In the various suggestions made there has been a tendency to assume that all streams should be returned to a state of nature. This, of course, is difficult under modern conditions. It would seem more reasonable to set apart certain streams for specific uses, such as for fishing, where extremely clean conditions are required, as well as for bathing and park purposes, and to select the streams most suited for the purpose. Other streams may be reserved for general uses, where occasional parks occur and only prevention of nuisance is necessary. It would seem that for many years many streams may be kept in shape where large volumes of flow are available with very little difficulty like the case of the Mississippi and Missouri Rivers.

The general means available for stream cleaning include various forms of treatment, including the removal of coarse floating material which will settle in sludge banks, and the treatment of the liquids so that it will be able to effect its own self-purification. The type of plant therefore depends upon the circumstances of the discharge of effluent. The state of the art at present offers various types of apparatus which can do the work. The choice should be made for the location by an expert engineer, so that the most value can be secured for the money expended.

In general, unless a large dilution is available, not only must the coarse floating material be removed, but also what is called the suspended matter, that is, material which tends to settle and will form sludge banks. For this purpose various apparatus are available. In most plants, the removal of the coarsest solids such as rags and trash is performed by bar screens with open-

ings as small as $\frac{3}{4}$ inch. In some cases finer screens are used, which seldom have openings smaller than $\frac{1}{16}$ inch. These have to be provided with means for automatic mechanical cleaning. A large part of the solids are removed by settling. At present the old-fashioned septic tank is not in good repute except for small installations on individual houses or small institutions. Settling can be performed either in one-story tanks, from which the solids are removed at frequent intervals for separate digestion or other disposal, or in two-story tanks in which the upper chamber is a settling chamber and the lower serves for digestion of the solids. The two-story tanks are called Imhoff tanks and have been widely used not only in the United States, but in Europe.

However, in many cases where the stream flow is very small in proportion to the population draining into it, further treatment is required, and in such cases, resort is had to biological means. The settled liquid can be sprinkled over beds of crushed stone in what is called a trickling filter, or the liquid can be treated in the so-called activated sludge process, involving the use of compressed air and the continued re-use of prepared sludge or solids. Either process makes a high grade effluent suitable for discharge into a stream of small diluting capacity, because such effluent can be made stable, in other words, put in a condition to effect their own self-purification without nuisance.

The recovery of the solids is a matter of interest, because for many years public attention has been focused on reclamation of something of value from sewage. Solids from settling plants are generally air dried and dumped. Occasionally a farmer will take them for use as a fertilizer. In the activated sludge process, however, a fertilizer can be produced at a cost which apparently is somewhat higher than the market value of the material. This material has considerable nitrogen value as a fertilizer, and is in demand for use on grass in golf clubs and elsewhere. There is still a large problem ahead, in the mechanical and commercial aspects of the fertilizer production. Milwaukee is trying it out.

Stream cleaning thus is a program which must be worked out after thorough survey of all the conditions attending the pollution of the stream. Sewage must be collected at some point

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for treatment and the treatment given which will produce the result desired. In some cases a complete treatment may be required even with sterilization of the liquid, but ordinarily sterilization is not resorted to because the bacteria in the sewage are helpful by proper selection in effecting the purification required.

An outstanding example locally of sewage treatment on a large scale is the work being carried on by the Sanitary District of Chicago in cleaning up the Illinois River. At the present time the Sanitary District of Chicago has five sewage treatment works in operation of various types. At the Des Plaines River Works is an activated sludge plant handling the sewage of some 55,000 people. The solids collected are made into a fertilizer by filter pressing and drying. The Calumet Sewage Treatment Works are handling 134,000 people. These works are largely Imhoff tanks, whereby the sewage is thoroughly settled and the sludge digested. There are, however, two units of activated sludge in which various tests are being carried on. A small trickling filter is also operated for comparative purposes. In addition there are three small plants at Morton Grove, Glenview and Northbrook of the Imhoff tank-trickling filter type, handling the sewage of those villages before discharge into the North Branch of the Chicago River.

In addition to the work already done, the District is embarked upon what is the largest program for sewage treatment at present before any city in the United States, or, for that matter, in the world. Under construction is a large activated sludge plant known as the North Side Sewage Treatment Works to handle 800,000 people, in general, living in the area extending north from Fullerton Avenue to the Cook County line. These works are now under construction and will be completed by the end of 1927. The estimated cost is about \$15,000,000 for the treatment works, and the additional intercepting sewers will bring the cost of the project up to some \$26,000,000.

On the West Side plans have been drawn and a contract is about ready to let for an Imhoff tank plant, which will handle the sewage coming from the area north of the Channel south of Fullerton Avenue and in general extending out to the Des Plaines River and beyond. These works will have eventually a load of over 1,600,-

000 people when completed. They are of interest because they will also serve to handle the sludge removed from the North Side works by digestion for ultimate disposal for dumping in dry form on land reserved for the purpose by the Trustees of the Sanitary District.

In addition, eventually there will be another plant south of the channel receiving all the sewage north of 87th Street from the Lake west, which will probably be an activated sludge plant. However, the choice of type is being left until such time as operating experience is available from the works of the Sanitary District and also from Milwaukee and Indianapolis.

Reference to the treatment program of Chicago would not be complete if some mention were not made of the industrial wastes which are important because of their magnitude. The two principal sources of waste are the Corn Products Refining Company and Packingtown. The former was equivalent to 400,000 and the latter is equivalent to over one million people. The Corn Products Refining Company is, however, working cooperatively with the Sanitary District, and finally has solved the problem of reclaiming most of the material which formerly went to waste. A bottling-up process has been worked out in which the solids which formerly reached the canal are accumulated and concentrated for filtering. In this way the pollution from Argo, which formerly reached the equivalent of 400,000, will shortly be reduced to less than 40,000.

In the case of Packingtown, however, the accomplishment to be reported is not so great. After arriving at a conclusion as to the technical ways of handling the situation, negotiations were deadlocked on the division of cost, with the final result that the Sanitary District has brought suit against the packers to enjoin them from discharging into the canal and its tributaries. The matter is now before the courts and anything final is likely to be delayed until a decision is reached. The only other waste of consequence is from the tanneries, which in general is equivalent to around 70,000 or 80,000 people.

The program embarked upon by the Sanitary District will first of all remove settling solids and next will treat enough of the effluent so that some oxygen will be present at all times, thereby avoiding the possibility of nuisance and making possible the return of fish life, particularly at

those points in the Illinois River where fish used to congregate. This program will also eliminate the sources of nuisance which have grown up through deposits behind dams and the like, and render the stream cleaner than it has been for generations.

The engineering work of the Sanitary District is under the general direction of Mr. E. I. Kelly, Chief Engineer. The author is the sanitary engineer.

SOME MEDICAL CONDITIONS THAT INFLUENCE SCHOLASTIC STANDING*

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Of every one hundred students entering the colleges of the country, twenty-five will pursue their studies without interruption and receive their diploma four years later as per schedule; seventy-five will withdraw from college before graduation. A small percentage of the latter group overcome their physical, financial, or social handicap, return to college and graduate later. The majority will join the ranks of alumni without further education.

According to a study over a five year period at the University of Illinois, the per cent. of matriculants graduating is 39.5 for women and 32.6 for men, which is much higher than the general average for the country. If to these percentages were added those withdrawals who will return and graduate with a later class, Illinois has the remarkable record of approximately two-fifths of all its registrants receiving diplomas.

In the case of students who leave college before graduation, it should be borne in mind that in education, as in industry, the accessory commodity is often as valuable as the primary product. However, the fact that a greater part of the material becomes a by-product offers a most interesting field for study and speculation as to the nature of its flaws and its behavior under manufacture.

The reasons for students leaving college before graduation are very diverse and often rather intangible. Of the group under consideration which left college before obtaining a degree

13.2% of its members volunteered the information that their withdrawal was due to ill health, 16.5% to the necessity of earning a livelihood, and 70.3% gave no explanation for their action.

The authors have attempted to ascertain the relation of the physical condition of the student to his success or failure to graduate. On the ratio of the above study, of the 1463 men matriculating in 1919, four hundred and seventy-seven or 32.6% should have received their diplomas in 1923, as anticipated when entering college; nine hundred and eighty-six should have withdrawn, a number of whom have graduated during the last three years. In making this study, one hundred and fifty records of members of the class of 1919 were selected at random from each of these two groups, hereafter designated as graduates and withdrawals, for consideration and comparison as to medical history, results of physical examination, and health status while in college.

It should be emphasized at the beginning that although the findings presented have been further supported by checking with similar groups in other classes, the number of cases studied are too small and their margin of difference insufficient to warrant sweeping conclusions. It is most striking, however, that in these two groups the greater history of morbidity, the higher accident rates, the increased abnormalities, and the larger number of defects were found in the withdrawals.

Habits. There seems to be some difference both in the quality and quantity of sleep of the graduate and the non-graduate. The students remaining in school until graduation on an average sleep about one-half hour more than those who withdraw before receiving their diploma. The former sleep an average of 8 to 8½ hours; the latter 7½ to 8 hours per day. It is also noted that the student who completed his course had more regular habits of sleep.

During the past five years the number of men by classes giving a history of using tobacco before entrance to college has decreased from 32 per cent. to approximately 27 per cent. In this comparative study it is found that the use of tobacco is a distinct hazard. Other things being apparently equal, smoking seems to lessen the chance of receiving a diploma by about 24%.

Six per cent. more withdrawals than graduates use tea and coffee. The finding is probably coincidental. It is very doubtful if this habit has

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any marked relation to scholarship. However, if the increased percentage of the withdrawals drinking these beverages was taken as a drawback to intellectual effort it represents a handicap approximately one-fourth that of the addiction to tobacco.

Adenoid Tissue. In addition to the increased loss of time from school because of illness, the great handicap of the withdrawals seems to have been the susceptibility of their adenoid tissue to inflammation. They have a marked predisposition to tonsillitis, appendicitis and catarrhal infections. Their defensive mechanism against micro-organisms and their products is lower than that of the graduates.

Whether or not this subnormal condition involves the spleen, the thymus, thyroid, and adrenals is unknown. However, it is well recognized that the majority of cases of thymic hyperplasia in status thymicolymphaticus, is associated with hyperplasia of the spleen and lymph glands. In this disease the bronchial, intestinal, mesenteric and retroperitoneal nodes are the most frequently involved. The tonsils are nearly always enlarged and adenoids are usually present.

According to Warthin, there is no line of demarcation between thymic hyperplasia as a separate condition and the associated hyperplasia of the lymph glands. Of the organs of internal secretion none is so sensitive as the thymus to disease or the more readily indicates its presence by pathologic change. Likewise in exophthalmic goiter and Addison's disease hyperplasia of the thymus is very frequent.

As there is such an intimate connection between the thymus and the lymph node and between the thymus and other glands of internal secretion, particularly the thyroid, adrenals, and gonads, it hardly seems illogical to assume this relation may be reciprocal and inverse. That is to say, where lymphoid tissue with weak resistance is found there may be an associated subnormality of endocrine function which, while clinically elusive may by group comparison be revealed as a relative inability to accomplish effectively a set task or as a lack of the quality of persistence essential to the attainment of a somewhat distant goal. Our findings, though by no means conclusive, are interesting when considered from this viewpoint.

Tonsils. Ten per cent. more graduates than

withdrawals have normal tonsils, more have had tonsillectomy and have about six per cent. less other tonsil abnormality. Although the withdrawal stayed in college about only one-third the time of the graduate he had about twice as much tonsil and other infection of the respiratory system per semester.

While the surgery considered occurred prior to matriculation, it is interesting that the non-graduate had had 7% more operations than the graduate. While the difference between the two groups is due almost entirely to adenoidectomy, tonsillectomy and appendectomy, surgery very common in the first two decades of life, it is remarkable that again the greater liability to infection fell upon the withdrawals. In other words, those leaving college seemed to have less resistant lymphatic tissue. This indication is further strengthened by the higher incidence of colds, tonsillitis, and respiratory disease among other members of this same group while in college.

History of Communicable Disease. In comparing the two groups as to their morbidity rates and the average age of disease occurrence, striking differences are found. The withdrawal has a morbidity incidence of infectious diseases of 4.05; the graduate 3.6. The average age of the one approximates twelve, that of the other nine years. The former not only has had slightly more infections than the latter but he has had it later in life and nearer adolescence.

This is especially noticeable in rubella, chickenpox, scarlet fever, mumps, influenza, and pneumonia, diseases whose source of infection is mainly the secretions of the naso-pharynx. In the case of malaria, whooping cough, measles, rheumatism, and typhoid fever there seems to be a very slight increase of the morbidity rate of the withdrawal over the graduate, but the higher average age incidence is still prevalent in the students who prematurely left college.

Tonsillitis and appendicitis, inflammation of the lymphatic tissue bordering the alimentary tract, parallel communicable disease in their higher incidence in the withdrawal and in their occurrence at a greater average age. It is known that the severity of typhoid fever is influenced by the age of the lymph nodules. Dublin has shown that typhoid fever increases the death expectancy during the three years following the attack, and

that the additional mortality is largely an expression of lowered resistance to infection.

Is there a similar prolonged decrease of bodily vigor following other communicable diseases, appendicitis and tonsillitis to which the withdrawal has been the more susceptible and which he has had nearer adolescence, when growth, function and emotion are most active and unstable?

Thyroid. It is interesting that of those leaving school prematurely 5.7% as compared with 3.5% of those who graduated had hypertrophy of the thyroid gland. The condition was not only more frequent but it was more severe in withdrawals, three cases being classified as marked and one had frank hyperthyroidism.

It is impossible to estimate accurately the effect of thyroid abnormality upon scholastic efficiency, but it is well known that either hypo- or hyper-activity of this gland influences many of the organs of the body, particularly the nervous system including the autonomies and the psyche.

The interdependence and interaction of the thyroid upon other glands of internal secretion are so adjusted that its abnormality must play a role not only in reaction to environment but it must prove a potent factor in the realization of aims and in the fixation of purpose.

Although considerable diversity in tissue function is not inconsistent with health, efficiency, and success, each difference, however, may be associated with some special predisposition to disease, to subnormality, or to unusual response to environmental stimuli. Thus these variations may indirectly, if not directly become decisive in determining action and character.

Within rather wide limits, achievement is not the result of cortical weight, but is due to cerebral quality which seems to be determined by elusive factors, probably the secretion and interaction of endocrines. May it not be that scholastic failure due to vacillation and to unsustained effort is, at least, in part, an expression of polyglandular subnormality and imbalance?

Vision. Directly and indirectly; recognized and unsuspected by the student, defective vision is a most important medical condition influencing scholarship. Errors of refraction were 10% more common in students leaving college before graduation than in those remaining until their courses were completed. Without mydriatic 28% of the withdrawals and 18% of the gradu-

ates showed uncorrected eye abnormalities when tested by the Snellen chart. During their academic careers the reference of withdrawals and graduates to oculists for special attention for their eyes was in the ratio of three to two.

These percentages by no means measure the relation of eye-strain and eye defects to education. While the human eye is capable of a great deal of close work modern demands upon it are continuously narrowing the margin between functional efficiency and manifestation of overwork. Many eyes that would otherwise ordinarily pass for normal under the demands of modern education exhibit symptoms.

Fortunate is the student whose eye-strain attracts his attention by the more easily recognized local symptoms of headaches, blurring, smarting, or sleepiness. Unlucky is he who is incapacitated for study due to such subtle signs of eye-strain as gastritis, inability to concentrate, insomnia, irritability, depression, psychasthenia or phobia.

The public needs to have a keener appreciation of the fact that the eyes were developed by nature to encompass an environment of large objects and that the printed page, the drawing board, the microscope and the vernier require a refinement of vision and many more eye movements than in looking at large things. Therefore, the demands for adjustment often exceed the ability of the eye to meet them without signs of stress. Thus the problem of eye-strain fluctuates with educational requirements, the rate of transportation, the complexity of work, and the nature of recreation.

It should also be generally understood that in the process of evolution man has become accustomed to light derived from a luminous body above him, and that very little light is reflected from the green or brown of the earth. Thus the upper part of his retina is not used to such strong stimulation as it often gets from the reflection of increased light from such bright surfaces as the printed page, cement pavements, etc. Although his eyes have a great power of accommodation the intensity and the duration of modern demands upon this mechanism of adjustment often result in eye strain, nervousness and fatigue.

The wide prevalence of neglected, uncorrected and improperly refracted myopic eyes adds much

to the overhead of education and produces failure in spite of good mental capacity. Too often abnormalities of the eyes have been suspected by the student and he has glasses fitted without mydriatic and consequently without relief of eye strain.

Under such circumstances, the fact that his eyes have been recently examined and that he is wearing glasses often gives him the false impression that nothing can be wrong with his eyes. When he begins to draw by day and read by night he may soon experience vague gastric symptoms, inability to concentrate, insomnia, gets neurasthenia, becomes discouraged and is ready to seek a different environment "because he has not felt like himself since beginning college."

Eye strain is bad enough in those of a sound constitution, but in those of a neuropathic heredity or with delicate nervous systems it quickly becomes the proverbial straw that breaks the camel's back. The eye strain of a neuropath often increases in clinical magnitude with startling rapidity. He becomes inefficient, discouraged, delinquent, has a "nervous breakdown" and fails scholastically unless his eye condition is suspected and he obtains prompt relief.

Eye strain often brings the able and ambitious student to the brink of failure before it is recognized. In this instance, the most pronounced symptoms may occur. In high school he may have been a leader in his class and in its outside activities. He leaves home to attend college aware of the most optimistic predictions of his friends. He strikes a new environment, his work is more difficult, his surroundings are strange, he has to use his eyes a great deal more and in the midst of it all he begins to have headaches, sleeps poorly, finds trouble in concentrating and begins to experience digestive disturbances. He is seized by misgivings as to the future, the sanguine expectations of his friends haunt him, he falls into a vicious circle of worry and is destined to join the great group of "nervous breakdowns" unless his condition is detected in time to save him.

Some students see well, yet have a slight eye strain that completely upsets them. A neuropath with a slight hypermetropia associated with astigmatism, oblique astigmatism or slight muscle imbalance with apparently keen eyes may

leave school a failure because he could not do his work. If his condition is discovered and his eye strain is removed his graduation is assured. Some of these individuals may be refracted by several oculists before getting relief. The secret of success with such persons seems to be in the fitting of the glasses to the nervous system as well as to the eyes. Although the strain may be small its removal with accuracy saves the nervous system from future bankruptcy.

With the exception of accidents, neglected strabismus is responsible for much of the loss of effective binocular vision observed among high school graduates. The delay and consequent loss of the eye from squint are usually the result of the belief that the child will grow out of his condition. So far as appearance is concerned, this may be true, but vision once lost is seldom restored. Squint will not receive prompt attention nor will its connection with amblyopia and impaired sight be recognized until the public is better educated to appreciate their relationship.

Hearing. In each of these groups of 150 there were two individuals with chronic otitis media or 1.3%. The chronically discharging ear is a menace to its owner and a liability to the medical profession. Of the nearly 25,000 high school graduates examined those with chronic otitis media usually give a history of their condition following measles, scarlet fever, influenza or tonsillitis. Associated with this condition so often is found a history of much treatment by many hands and a profoundly pessimistic patient. He takes the view that his condition cannot be remedied. Some of them, however, treat the condition lightly and attach no great importance to it because they have received the medical advice that it is not of a serious nature.

It is impossible to examine the medical records of young adolescents and not be impressed with the great need for the watching of ear complications in the exanthemata and with the necessity of following the convalescent from these diseases well beyond recovery. While adenoids and the tonsils are receiving increased attention many of them are removed after the ear has become involved. Earache is too often considered by parents to be of little importance and not given special attention until the drum is perforated and discharge is present. Both the suppurative and non-suppurative inflammation of the ear should receive prompt treatment. The

ears of children should be watched, frequently tested, and promptly treated.

Although swimming is an excellent form of exercise, it presents an ear hazard, particularly where the pools are insufficiently equipped to maintain safe, sanitary conditions or are dangerously polluted by frequent overload. Many of the pools for institutions and communities are too small for the number of their prospective users and are frequently made insanitary and dangerous because of the demands made upon them at certain times of the year.

Not only is the student handicapped on the drill field and in the classroom by his impaired hearing, but he has to be rather the exception, if his deafness does not cause him to suffer from a change in personality which will prove a disadvantage to him in life. The speech defects often associated with deafness and the tendency of the deaf individual to give irrelevant answers to questions because of not hearing them distinctly give rise to expressions of merriment or amazement on the faces of his classmates which increase his self-consciousness and hypersensitiveness. Thus he is prone to develop a shut-in personality and to acquire a tendency to avoid association with other people.

Through repeated failure to secure relief and through imposition practiced upon them by the unprincipled, the deaf frequently become skeptical of all efforts toward their improvement. Unfulfilled promises and unrealized prophecies from the charlatan and the over-confident doctor seem to have weakened their faith in humanity. If fortunate in temperament the deaf individual accepts his lot with stoicism, but sooner or later most of them become discouraged and despondent.

Much may be done for the hopelessness of such individuals with chronic otitis or deafness by putting them in the hands of a specialist capable of adequately treating them. The student with deafness can be much helped by friendly encouragement to build up a defensive reaction against hypersensitiveness and depression.

OTHER DIFFERENCES BETWEEN THE WITHDRAWALS AND THE GRADUATES

In addition to the difference in the adenoid tissue, the greater susceptibility to infection and the defects of the special sense organs, it is found

that the withdrawal is about six months older than the graduate. He under weighs the latter approximately three pounds and his chest expansion averages, at least, an inch and a half less than the student who remains in college until he received his diploma. These rather small differences may be accounted for within the limits of statistical variation or they may be indicative of the somewhat generally inferior health of the withdrawal.

During their stay in college the withdrawal and the graduate called at the Health Service Station in the proportion of three to two. They sought excuses from classes for physical reasons in the same ratio. The excuse rate for all causes of the former was seven as compared to four for the latter.

The occurrence of accidents in the two groups as given in the medical history shows very little difference, but in college the withdrawal had an injury rate of more than twice that of the graduate. As many of these were contusions, it points to greater participation in outside activities of a physical nature, or a greater lack of precaution and alertness by the withdrawal than by the graduate in avoiding traumata.

The withdrawal exceeds the graduate by fifty per cent. in complaints associated with the digestive tract. Most of these conditions were of such obvious etiology as of dining too well, food contaminated by bacteria, constipation, appendicitis, or eye strain. However, some of them were those vague gastritides and sudden enteritides of psychic and neurotic origin that seem to have their source in phobias induced by impending tests.

CONCLUSIONS

1. While the number of records studied and the margin of difference between the withdrawals and graduates are too small to warrant comprehensive conclusions, however, it is most striking that the greater history of morbidity and the larger per cent. of defects should be found in the group leaving college before receiving a diploma.

2. A greater number of withdrawals than graduates were addicted to the use of tobacco.

3. The withdrawal had more communicable disease than the graduate and his average age of having it was nearer adolescence when growth,

function, and emotion were most active and unstable.

4. The withdrawal had more infection of his respiratory system and more disturbances of his digestive tract than the graduate.

5. The findings presented are not inconsistent with the view that the withdrawal has less resistant lymphoid tissue than the graduate,—that his bodily defense against infection was the weaker of the two.

6. Although eye strain is generally recognized as of great importance as a handicap in acquiring education, it is doubtful if its significance is fully appreciated.

7. Fifty per cent. more withdrawals than graduates sought medical advice while in school, and the same increased percentage requested excuses from class for physical reasons.

8. Lack of vigor and physical defects play a greater role in scholastic failure than is usually attributed to them by the individuals who are unable to keep up with their college work.

DISCUSSION

Dr. G. F. Scheib, Champaign: Dr. Beard merits the thanks of this section for this fine, comprehensive paper. It certainly has a great deal of food for thought.

It is my opportunity to see a number of students of the University of Illinois, as my office is located in the University district.

I want to congratulate Dr. Beard on his very able paper, and especially on what he says in reference to eye strain due to errors of refraction. His reference to the use of a cycloplegic is sound advice; for I am convinced that the oculist in determining the correct refraction needs a good cycloplegic. My observation and experience convinces me that other methods are largely guess work in correcting refractive errors in people under forty years of age. These latent errors are common occurrences in every oculist's experience, and serve as illustrations of the need of careful refraction with a cycloplegic and retinoscopy. In the majority of those wearing glasses presented without the use of a cycloplegic and who are not comfortable, the fault lies in the fact that the latent errors were not discovered. It is certainly distressing to note the delinquencies in school children and students due to an error of refraction, which, when corrected, changes the poor class standing to one of the first order.

From an economic standpoint it is important that these preventive measures are instituted. The time and expenses required for a student at an extra summer session involves an expense which might have been avoided if the eyes had been properly corrected early in the school year.

It is time well spent to impress upon parents and teachers the importance of early and careful refraction. The proper correction of refractive errors has a place in preventive medicine and economics.

SURGICAL DIATHERMY IN ACCESSIBLE NEOPLASMS*

DISRAELI KOBAK, M.D.

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CHICAGO

Operative procedure by surgical diathermy in accessible or malignant neoplasms has evoked much discussion in recent years and has demonstrated by experience the superiority of this method over that of the knife. In spite of extensive literature published on the subject, both in this country and abroad, much confusion and misunderstanding still exists as to the merits and utility of this method. Because of this we desire to emphasize the importance and value of this agency without in any way detracting from the value of other measures.

By diathermy, meaning to heat through, any degree of heat can be produced within the tissues and it can be utilized either as medical diathermy—a heat that does not impair function or devitalize structure—or it can be raised to such an intense degree as is sufficient to devitalize or completely destroy by desiccation, coagulation or fulguration any accessible neoplasm.

Coagulation and desiccation are the only visible changes in the cellular structure according to the degree of the destructive heat created in the tissues at the point of the active electrode. To accomplish coagulation one employs two terminals and hence two electrodes; to accomplish dehydration or desiccation one employs a single electrode of higher voltage from an Oudin or Tesla terminal. In coagulation the degree of heat can be measured from the attached meter to the apparatus, which indicates heat or amperage. In desiccation or dehydration the important factor is the rise in voltage and the relative fall in heat or amperage. Hence, the meter gives little or no indication to the amount of electric energy introduced into the tissue. Experience and ocular demonstration, however, are convincing guides in the latter as well as the former method. The visual evidence of coagulation is the gradual transformation of the tis-

*Read before the Section on Surgery, Illinois State Medical Society, Champaign, May 19, 1926.

sue in the vicinity of the active electrode into a grayish appearance, followed rapidly by a bubbling about the electrode and a concomitant escape of a vapor-like gas. On removal of the electrode the treated tissue is of a soft, cheesy consistency, and is readily scraped away by a dull curette. If coagulation continues beyond this point stellate sparking is seen to escape from and about the point or disc electrode. The underlying or adjacent tissue becomes hard and firm and carbonization follows. In desiccation the picture somewhat parallels that of coagulation. The heat created is of less degree, hence destruction of tissue is more superficial and is accomplished mostly by the process of cellular dehydration. The belief that coagulation and desiccation are one and the same is, therefore, to be dissipated.

Small neoplasms of the basal cell type yield very readily to desiccation. Under local anesthesia, such growths as are frequently located in the inner or outer canthus of the eye or face, are brushed over or lightly impinged with a sharp needle electrode attached to a suitable handle and a foot switch. The growth becomes dry, hard and horny in texture, within the space of a few minutes. Uneventful healing follows and the cosmetic effect is excellent as little or no scarification follows the desiccation method. It has been our experience that desiccation is the method of choice in all accessible benign and malignant surgical lesions involving cutaneous surfaces, wherein the neoplasm is localized, and where good cosmetic results are essential.

In the more advanced malignancies, such as squamous cell epitheliomas of the lip and body, or cancer of the tongue, tonsils, nasopharynx or larynx, coagulation offers the best results where complete eradication is desired. According to the location of the neoplasm, general anesthesia by ether or chloroform can be used. The same pre-operative attention is given, with the addition, however, of two hypodermic injections of hyoscine and morphin (1/100 and 1/4 gr.) respectively, one and one-half and three-quarters hours prior to the operation. By so doing the general anesthesia is materially augmented. Walling off of the neoplasm is always attempted when possible. The pointed electrode is inserted into the periphery of the growth, and gradual

coagulation follows within a few seconds. The electrode is kept in contact until bubbling or evaporation takes place. The foot switch is then released and the electrode removed and inserted, in the same manner, in an adjacent spot to the already coagulated section. After the peripheral walling off the same process is continued centripitally until the entire mass is coagulated. Removal of the coagulated neoplasm is then followed by curetting the destroyed growth with a dull curette. Bleeding, if it occurs during the operation, can be promptly stopped by local fulguration. Post-operative attention differs in no way from the usual routine.

The disadvantage of the knife incision is the danger of implantation of viable cells, hemorrhage, and the possible transmission through the circulation of cancer cells into distal parts. The cosmetic results, also, cannot approach anywhere near those of desiccation. According to Kollicher and Bloodgood, "Incomplete excision with the knife is more dangerous than a failure from other methods."

The advantages of surgical diathermy may, therefore, be summarized as follows:

1. The entire growth can be destroyed *in situ*.
2. The ability to transmit the heat to a depth in the tissue beyond that actually treated, thus assuring the destruction of any malignant cells which have been lying beyond the area which actually appears to have been involved.
3. The practical elimination of either primary or secondary hemorrhage, as the blood vessels are thrombosed beyond the area of destruction.
4. For the same reason there is less risk of spread of metastatic elements through either the blood or lymph channels.
5. The minimum formation of connective tissue—hence, little scarring and good cosmetic effect.
6. Alleviation of pain; practically no surgical shock; accuracy of dosage, because the current is under absolute control of the operator, and the sterilization of the wound because of the heat created within the field operated on, incidental to treatment.
7. Familiarity with the technique is essential. Given an exact diagnosis and proper establishment of therapeutic indications, surgical dia-

thermy will prove a reliable and effective addition to our armamentarium.

30 North Michigan Avenue.

DISCUSSION

Dr. H. T. Plank, Chicago: Dr. Kobak¹ has presented a very detailed paper, most of which I agree with. There are a few things with which I disagree. He did not emphasize enough the importance of the hyoscin-morphin anesthesia in these cases. It is almost impossible to use ether when using the spark because you are liable to have an explosion. If you use the hyoscin-morphin anesthesia, just enough to cut off the reflexes, you can take the ether away and work for an hour or more without further anesthesia and without any danger. We have used it up to three-quarters of a grain of morphin and 1/33 of hyoscin without any danger.

Another thing with which I disagree is the use of the dull curette. We use the sharpest curette we can find and we continue to scrape off the tissue as long as we can. When we cannot scrape off any more we know we are down to normal tissue. I have a few slides which show what I think is the minimum and maximum amount of tissue that can be destroyed.

Dr. Carl Beck, Chicago: Destruction of tissue by the cautery has for a long time been very much in favor. The cautery method of Percy produces a similar result to this coagulation method. All these methods are valuable and have their place for individual cases not only for malignancy but for other neoplasms that you want to destroy. You can destroy cells chemically, electrically and you can remove them surgically. The disadvantage of surgical methods has been brought out, but of that we are not sure. The eye is not a good knife. You can go from an infected area to a noninfected area with a curette and you can carry the cells and produce a metastatic process. This method, however, destroys the tissue permanently. Percy is very enthusiastic about the heat of the cautery. Dr. Ochsner was very enthusiastic about the method of cautery excision of tumors because for a distance it destroyed the malignant material and prevented dissemination. We are using in our practice coagulation to a certain extent. I personally do not use it. There are two indications for it, a small percentage where the patient hates the knife but is easily induced to submit to an operation with the cautery and, second, it leaves an insignificant scar. Even in large breast tumors we do not sew up the wound and you will be surprised what a relatively small scar remains. We do that for this reason that in giving postoperative x-ray or radium treatment the rays can penetrate through the open space instead of having to go through the skin and in this way they have a better effect on distant infection. I will say just one word in regard to this method in connection with malignancy in the glands and so on. The Doctor said that he would treat the original tumor

with this method. You cannot get any case absolutely cured by simply removing the primary tumor and secondary glands. There are intermediate sections which are infected. Unless it is a real block dissection down to the last area of infection there cannot be any hope of cure. We get a large number of cases where the glands are infected and in these cases the chances of cure are very small. Our hope is in the future with some kind of systemic treatment.

Dr. Alden Alguire, Belvidere: I would like to ask the Doctor what value he places on dietetic treatment after operation as to preventing recurrence.

Dr. D. Kobak, Chicago (closing the discussion): I wish to thank both Dr. Plank and Dr. Beck for their courtesy in discussing my paper. I could not have had more able exponents or critics than both of these gentlemen.

I agree with Dr. Plank as to the value of hyoscin and morphin preoperatively. I have found that to be a valuable adjunct to general anesthesia. I am doubtful as to the value of the very sharp curette after the neoplasm has been destroyed by coagulation or desiccation. Since it is a corollary that one of the immediate after effects of surgical diathermy is the thrombosing or plugging up of the contiguous circulation, it would seem to me as illogical surgery to tamper or try to break down one of the important defenses by opening fresh bleeders into the operative field by the sharp edge of the curette. The scraping away of the coagulated mass with the dull steel curette until a definite or grating resistance is encountered is all that is necessary. The cheesy, necrotic resistance met within the early curetment of a neoplasm, and followed by the grating resistance at the end of the scraping is an index that the operator has reached healthy soil. The popularity of the Percy cautery is a paradox in surgery by the thermic method. In spite of the fact that it is definitely inferior in manipulation and end results to that of surgical diathermy, it has been widely accepted as the most useful and orthodox measure when thermic cauterization is considered. This is no doubt due to the fact that it has a priority claim in age, as it is by far the older method known. I am certain that Dr. Beck who has had a large experience with the Percy or Paquelin cautery will in time find the cautery by diathermy the superior agent and the method of choice. For the Percy cautery chars and burns the tissue by contact and only produces superficial penetration, while surgical diathermy is a cold electrode that produces heat and coagulation of tissue within the neoplasm, which can be regulated by the operator to any degree of intensity or depth. The former is epithermy while the latter is endothermy.

In answer to Dr. Alguire, we assume that the operation is of a major type and we adopt the same measures as in any surgical case. One hears of special diets in malignancy. I do not, however, know of any specific diet, except that one may place the patient on a dietary regime which has a detoxifying effect.

THE SURGICAL TREATMENT OF CHRONIC OSTEOMYELITIS*

DON W. DEAL, M.D.
SPRINGFIELD, ILL.

Every surgeon of even limited clinical experience has come to look upon old extensive osteomyelitis cases as exceedingly trying not only to the patient, but to himself. The results, in many instances, have been disappointing and not infrequently the post-operative treatment has extended over long periods of time, creating prolonged disability and occasioning a large amount of pain and distress. The older method of leaving the wounds open and repacking for indefinite periods not only entailed marked discomfort with prolonged hospitalization and increased expense for the patient, but frequently ended in a poor functional result due to excessive scarification and marked craters and adhesions, binding the muscles and tendons to the surrounding tissues.

About three years ago the B. I. P. technique for dealing with these cases was adopted by us and since that time it has been constantly employed with much happier results for the patient and with a striking reduction in disability; while for the surgeon and the hospital its introduction marked a decided decrease in monotonous and arduous aftercare.

The technique, as now employed by us, is relatively simple and will be productive of satisfactory results when employed with reasonable skill and care.

So that I may not encroach upon your time, I shall discuss the technique and advantages and disadvantages of this method in connection with four of our cases, which are now sixteen in number. What I have to say in regard to these cases may be regarded as typical of all.

Case 1. W. S., aged 6 years. In September, 1923, this child struck his right tibia against a board. No disability was noted for a period of four weeks, but at that time he developed pain and swelling just below the knee. On October 26, 1923, he was given surgical treatment with a radical operation consisting of chiselling, curettment and open pack. The wound did not close and when we saw him first in January, 1924, the tibia was found to be involved throughout its entire length with sinuses along the entire surface of the bone with the condition so serious that ampu-

tation was suggested by a thoroughly competent surgeon.

The patient was operated on according to B. I. P. method on January 7 and the patient left the hospital on crutches on February 1. The skin separated, but the fat, which was exposed, throughout the entire length of the incision, remained intact. There was no drainage and there was satisfactory healing.

The technique employed in this case was as follows: The skin is carefully prepared over a large area about the necrotic bone and over the buttock where fat is to be removed for transplantation. All of the diseased bone is chiseled and curetted away radically according to the method pursued in the older operations. The bone cavity is then thoroughly scrubbed out, including the soft tissue, with 95% grain alcohol and this is continued for a period of several minutes. The cavity is then dried with gauze and is packed with dry gauze until all oozing is controlled. This pack is then removed and the bone and surrounding tissues are then scrubbed with so-called B. I. P. paste which consists of one part of bismuth subnitrate and two parts of iodoform with liquid petrolatum to make a moderately thick paste.

After rubbing in this paste very thoroughly, all excess is removed by sponging and the cavity is again packed with dry gauze to control oozing, while the fat for transplantation is being obtained from the buttock.

Fat is then taken from the buttock in sufficient quantity to fill the cavity, the fat being first rolled in paste, but permitting no excess of paste to remain. After this paste covered fat is placed in the cavity, care being taken that enough fat is used to completely fill it, the wound is closed without drainage.

In this particular case it was found that the skin had separated by the sutures cutting through on the third day and the paste covered fat was exposed over the length of the incision which was practically the length of the tibia. It was interesting to note that the exposed fat did not become infected nor did it break down. It remained exposed for a period of four weeks until the incision was covered by new skin. At no time was there any sign of infection and the case ran a normal course with redressings twice a week for a period of a month.

In this case we felt that in all probability too much fat had been employed and that the swelling of this transplanted fat had caused such tension in the skin to tear out the sutures.

Occasionally in these cases an oily exudate is noted at the site of the wound for a few days, but in none of our cases has there been any suspicion of pus. This oily exudate, I take it, comes from the liquid petrolatum employed in the base of the paste. The oil is inert and is not absorbed, which accounts for a moderate amount of draining into the dressings. In our further cases we have exercised care that the cavity be not so snugly filled with fat and with this precaution

*Read before the Section on Surgery, Illinois State Medical Society, Champaign, May 19, 1926.

we have had no further separation of the skin or tearing out of sutures.

The exact amount of fat transplanted is of very definite importance. While in our first experience an excess was used resulting in the separation of the wound we found that we had to guard against the employment of too little fat which would give us equally unfortunate results. The proper amount of fat to be employed must be determined at the time of operation by the degree of tension on the skin at the time of closure. An allowance must always be made for some swelling of the fat.

In addition to the successful treatment of cases of extensive chronic osteomyelitis by the B. I. P. method, we have found the procedure equally useful in bone sinuses such as may follow gunshot wounds or in Stineman pin fistulae that fail to close. In these cases the sinus is simply curetted out, treated as previously described and packed with strips of fat covered with B. I. P. paste.

In the second case of osteomyelitis of the lower end of shaft of the femur, of two years' standing, the following points may prove of interest. A year after the development of osteomyelitis and a year prior to our seeing the patient, someone had unsuccessfully operated on this patient by the old method. For twelve months the wound had received constant attention and dressing and at the time the patient was seen by us, there were two discharging sinuses extending from the femur. Incidentally, this patient had had x-ray and violet ray treatment without material relief.

The patient showed extensive shrinkage in the soft tissues about the sinuses and a large crater like adhesive scar. He was operated on by the B. I. P. method five months ago. The scar and infected tracts were removed and there was radical extensive removal of the necrotic bone. Except for the exudation of a small amount of oil which continued for a period of ten days, the wound healed without drainage and at the present time there is no depression, no adhesion and the scar is found to be freely movable. Within three weeks from the date of operation he was discharged from the hospital and no subsequent dressing was necessary. Within a short time he resumed his ordinary occupation.

In another case it was found necessary to

remove half of the neck of the femur and all of the head of the femur except a shell of articulating surface. The case was handled as previously described and the wound healed by first intention so that no dressing whatever was required after a period of ten days and the patient was entirely comfortable by using crutches for several weeks on account of a fear of fracture. The scar in this case is healed, soft and pliable with no depression whatever and the motion in the hip is absolutely normal in all directions so that the patient walks without impediment and without the slightest discomfort.

The one disadvantage of this very excellent method of treatment lies in the difficulty in controlling the patient, particularly when there is danger of pathological fracture due to extensive necrosis of bone.

On account of the fact that there is no pain or apparent disability and in view of the fact that no dressings are required, the patient is apt to pass quickly from the observation of the surgeon and is disposed to resume physical activity before regeneration of the bone can take place. In most instances this danger can be overcome by careful instruction to the patient and by insisting on his return for observation, but under this treatment regeneration does take place much more rapidly than under the former method and the danger of pathologic fracture is of shorter duration. In most cases the patient is able to return to work without danger at the expiration of two or three weeks.

The B. I. P. paste was used by us several years previously without success and no doubt was in bad repute by all who had used it when attempts were made to employ the combination as Beck's paste is used. It was absolutely a failure and frequently caused an aggravated condition in our experience. However, as used in our hands at present, as suggested in this article, we are quite enthusiastic.

Finally to summarize. In our experience with B. I. P. method of treating these cases we have reduced the post-operative attention more than 75 per cent.

There is ordinarily no more dressings required than follow a clean laparotomy.

There is much less discomfort to the patient. Cosmetic results are greatly improved.

Functional results are greatly improved be-

cause craters and adhesions are reduced to the minimum.

The bone will regenerate more rapidly and finally the temporary disability is reduced fully one-half.

DISCUSSION

Dr. Carl Beck, Chicago: The Bipp method is really an interesting one and it has received, particularly in England, a great deal of attention. It has not been used a great deal in this country but you will probably be interested to know what our present views are on the bismuth paste method, its relation to the Bipp method and the relation to extensive osteomyelitis. Any sinus that is not connected with a large cavity at the bottom will heal not only by this paste but by any paste. Bismuth is a little more conducive to forming a better connection. It will produce a narrow channel and will produce a good connective tissue scar and will heal. If there is a cavity no method will heal. Doctor Deal's method is good. He removes all the outer portion and transforms a deep cavity into an open cavity. Our experience has been to use a transplant with a skin flap with little fat. The Doctor covers it first with paste and then with fat. That is a very good method. Any fatty tissue connected with a fresh healthy wound will produce connective tissue and will heal and if the skin sloughs away it makes a good condition in which to put in a skin graft. The question in all osteomyelitis cases is to clean up the deep cavity and then cover it with something. Do not leave the cavity in the shape of a bottle, but leave it in the shape of a trough. When it is in the shape of a trough you can put in skin, fat or muscle or any other tissue. I have for years used muscle. Bier in Berlin uses skin. Other men have used skin grafts. Lane for a time made a very interesting experiment. He took a Ienhsls mover of the cavity, lined with skin grafts the outer surface wound outside in place of inside. In this way he got very close contact with the surface. Any cavity which you can line with fat or skin will form into a healthy scar.

Dr. J. R. Harger, Chicago: This is a subject that has interested me for a great many years. I was very glad to hear what Dr. Deal had to say. Personally my experience has not been with the Bipp paste but with a great many cases where these old osteomyelitic bone conditions have been made into a surface rather than a cavity. However extensive the destruction in the chronic type, if enough of the shaft of the bone is removed to leave a sterile surface rather than a cavity, most of them will close and close very timely if filled with any soft tissue, whether it is fat or muscle or skin. In the tibia, for instance, when the shaft is extensively involved in the chronic process and it is chiseled away until you have a large surface or trough, then simply roll in the overlying muscle or skin and cover with a roll of gauze to keep it in place and you get a very excellent result. Take those cases in the lower end of the femur or the upper end of the tibia where you cannot make such a surface and where

the cavity may be back to the center of the bone, a vertical flap in the soft tissues over the tibia or below the knee, packed to fill the cavity will give a good result.

When Dr. Deal was talking I wondered if this packing of Bipp paste would not interfere to a certain extent with the blood supply to the graft, the one where Dr. Deal first spoke of it and where he separated the flap entirely from the hip and when it was detached, the blood supply was entirely destroyed. I wondered if packing this surface with Bipp paste would not interfere with the blood supply or nourishment. I do not know how much effect Bipp paste would have but it seems to me most of those would heal with a vertical flap or fat without the paste. Suffice it to say when a surface can be made and one of these cavities filled with soft tissues, whatever means you may use, you will get good results.

Dr. Don Deal, Springfield (closing the discussion): Before using the transplant of fat we ordinarily use a pedicle flap of muscle and occasionally skin. However, this has a disadvantage of making some disfigurement or depression and possibly may interfere with the muscle function. The free, flap transplant used at present has the advantage of rounding out the tissues getting rid of craters and depressions and at the same time no normal functioning muscle is detached. I feel that the anatomic results and the appearance of the injured area are greatly improved by this method over the pedicle flap method.

DANGERS OF IODINE IN TREATMENT OF GOITER*

JAMES H. HUTTON, M.D.

CHICAGO

It is my impression, and this is shared by many men more able than myself, that there is real danger connected with the use of iodine in the treatment of goiter. Presumably a paper given before this section should be devoted to proving the foundation for such an opinion since iodine is being rather widely used in this connection and is being advised by many health departments. I should like to state the dangers as I see them and then offer some evidence in support of my contention. The dangers might be viewed under two divisions; first, those arising as the result of iodine medication on a wholesale basis by public health departments in the alleged prevention and cure of goiter, and second, those occurring when the same drug is used by the private practitioner in the treatment of his goiter patients.

The widespread indiscriminate use as by table

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salt or in drinking water may transform many adenomata without hyperthyroidism into the toxic variety. It may cause temporary improvement in some toxic goiters, either adenomatous or exophthalmic, this being followed by an aggravation of symptoms, as it usually is, when iodine will have lost its value as a preoperative measure.

The danger is a little greater when iodine is used *injudiciously* in private practice because the dosage is larger, though very small quantities are sufficient to produce the changes described in some goiters; larger doses will affect more goiters of the adenomatous type.

Within the last few years, since iodine became popular as a remedy for goiter, a new form of toxic goiter has made its appearance, called "iodine hyperthyroidism." This is, in most cases, adenoma with hyperthyroidism, but the symptoms are more severe and the progress more rapid than in those adenomas that become toxic from other causes than iodine. Iodine still further complicates the problem as in patients who have been so treated the regenerative power of the thyroid is not so great as in other patients, so that the surgeon must leave a larger portion of the gland to prevent symptoms of hypothyroidism.

To remove one source of argument let me say at the outset that I admit the value of iodine in the prevention and cure of goiter under certain conditions. These conditions are:

1. As a pre-operative measure. In this condition or under these circumstances where a patient is in a hospital and can be carefully watched.

2. In the treatment of diffuse colloid goiter after a careful examination by the doctor.

Many years ago it was said that the medical profession was busy putting drugs of which it knew little into bodies of which it knew less. That was a "nasty crack," but in our iodine medication we come near being guilty of that very thing. To elaborate a little on this let me call your attention to the fact that thyroid pathology is very imperfectly understood and that it is quite impossible at this time to tell what clinical symptoms the patient may have suffered from by examining a section of the gland. Further, that the normal histology of the gland is not thoroughly understood.

To emphasize still further our imperfect understanding of this problem let me call your attention to the multiplicity of terms and classifications appearing in our goiter literature at this time.

ARRANGEMENT OF TERMS

SIMPLE NON-TOXIC:

(a) Diffuse colloid goiter (also called by various writers as follows):

1. Simple goiter.
2. Endemic goiter.
3. Adolescent.
4. Adolescent vascular.
5. Adolescent colloid.
6. Non-toxic.
7. Goiter with apparently normal secretory activity.

(b) Adenomatous goiter without hyperthyroidism (also referred to as):

1. Endemic.
2. Simple.
3. Non-toxic.
4. Nodular.
5. Goiter with apparently normal secretory activity.

TOXIC:

(a) Adenomatous goiter with hyperthyroidism (also called):

1. Goiter with increased secretory activity.
2. Toxic (basedowian syndrome).
3. Atypical hyperthyroidism (basedowoid syndrome).
4. Pseudo-Graves' disease.
5. Formes frustes or Graves' disease.
6. Thyro-toxic.
7. Secondarily toxic.

(b) Exophthalmic goiter (also called):

1. Graves' disease.
2. Parry's disease.
3. Basedow's disease.
4. Toxic.

You will note that the profession is agreed on the division of goiters into toxic and non-toxic, this division being on the basis of functional activity of the gland. In both groups you will note there are two subdivisions, each being characterized in its simplest terms by the fact that one group is a smooth, uniform enlargement of the entire gland and that in the other case there is one or many nodules present, or that the enlargement is not symmetrical; one lobe or the isthmus being involved, but not the entire gland. This is the so-called "adenoma." Iodine should never be given to a patient having that kind of a goiter whether it be toxic or not, with one possible exception, if it is non-toxic iodine is the one thing that most promptly transforms into a toxic goiter and the tendency is for that change in activity to take place anyway in spite

of all we can do, so that the giving of iodine is adding fuel to the fire.

The longer a patient has an adenomatous goiter the more dangerous it becomes because the greater is the likelihood of its becoming an adenoma with hyperthyroidism. Once that change has taken place iodine rarely is of any benefit and should not be given except as a pre-operative measure and then for only a few days preceding operation, whether that operation be a removal of part of the gland or some other measure for reducing its activity. Occasionally one of these adenomatous goiters will respond favorably to iodine, but usually they are made worse by it and at this time there is no way of telling except by trial which will respond favorably and which will be made worse by it.

The diffuse symmetrical enlargements of the thyroid are much safer to give iodine to than are the asymmetrical or adenomatous varieties. The diffuse colloid goiter is the only one to which iodine can safely be given at any and all times and it is the only variety that can be cured by iodine. It is possible but by no means certain that the adenomatous variety may be prevented by it.

The other symmetrical enlargement is that of exophthalmic goiter or Graves' disease. Iodine does not cure this condition and is of only temporary benefit, so that its use should be confined to pre-operative measures if one wishes to have this goiter operated on or not used at all if he wishes to treat it medically. In the writer's opinion this is many times a medical condition and probably medical treatment is about as successful as surgery.

In this connection I am willing to admit that the use of iodine in exophthalmic goiter will cause a reduction in the pulse rate, a diminution of the nervousness, stop the nausea, vomiting and diarrhea, and cause a general improvement in the patient's condition. Pathologically it will cause a change in the form of the epithelium from the hyperplastic, hypertrophic variety to the low columnar type with an increase in the amount of the colloid material. In other words, the gland is brought back to the resting stage, but this improvement is only temporary. If the iodine is withdrawn the symptoms return rapidly and with greater severity than before; if the patient indulges in

extra exertion or excitement the symptoms return, and finally they return anyway even if the medication is continued. Curiously, iodine seems to have the power of causing this amelioration of symptoms but once. That is, if it is withdrawn and the symptoms return the resumption of the medication does not cause a disappearance of the symptoms a second time.

If our knowledge was final and absolute we would not have so many classifications. Until that moment arrives it seems that as a public health measure we should confine ourselves to educating the goiter patient to the fact that such a condition can many times be cured in its early stages much more easily than later. Parents might at the same time be informed that goiter is at least many times a preventable disease and that a regular periodic health examination will usually enable the doctor to catch those things easily. Then educate the doctor to the dangers and possibilities for good and harm in iodine medication, but let us not tell the laity that iodine is a cure for goiter. In the majority of cases it is not.

DISCUSSION

Dr. Nathan S. Davis III, Chicago: You came to this paper a little earlier than I expected you would, but I have talked to Dr. Hutton about what he was going to say and I do not feel that I have entirely missed it. It seems to me there is a great deal of danger in the promiscuous use of iodine, which of course Dr. Hutton has brought out. There is some benefit in giving it to children, but there it certainly should be under observation. As to the effect of the administration to adults, that is where we should be especially careful because of its bringing out of the hyperthyroid symptoms, especially in adenoma cases. In giving iodine and iodized salt it is claimed we are giving physiologic amounts. We really do not know what physiologic amounts are. If we are giving normal quantities we should get the same effect if a person had an adenoma and went to live in a non-goiterous district and ate the same type of food and lived the same type of life of the people in that district, who are not subject to the goiter, are living, and I do not think that happens.

It looks as if we are giving too much iodine or we are giving iodine in a form that is too readily utilized. Most of the iodine taken by those living in non-goiterous regions comes from fish foods and things of that sort, that is, it is in combination with organic substances rather than as a metallic salt. Over a great many years my father used iodine a great deal, especially in small goiters, and I have used it to a certain extent. I have not noticed any toxic developments. However, most of the iodine we have given,

and I notice in my father's records he gave up to a grain of sublimed iodine three times a day, has been in a wax mass combination. There is some evidence that iodine given in such a manner, i. e. in combination with fats is not absorbed as readily as iodine given as a sodium iodine or as the Lugol solutions or in some of the other preparations now on the market which may account for our not having had any toxic reactions.

Dr. Edward H. Ochsner, Chicago: I came over this morning especially to hear Dr. Hutton and Dr. Davis, and I have been astonished at the amount of useful information that I have acquired. Things I have known only superficially and in a general way have been clarified to me and have taught me my lack of information on some subjects about which I should have been informed. It simply shows that we are making a tremendous mistake by our tendency to overspecialize. Personally I have always tried to be a physician first and incidentally a surgeon, and I am sure that many of our younger men err along this line much more than I have erred and forget the breadth of our profession.

I think we can all agree with Dr. Hutton in condemning in a very vigorous way the indiscriminate wholesale use of iodine. This putting iodine into the drinking water for the public I think is an unjustifiable procedure, and I am glad to be here before this branch to condemn it in as strong language as I am capable of. I think it lays us open to very serious charges by people who think we are trying to force our ideas and our opinions on the public in general. I think it gives them an opening which we as medical men should not give them. You know there are organizations in this country which accuse us of meddling with other people's affairs. I think if I were a layman, I would resent having the health department in any city where I lived feeding my children iodine through the city drinking water. I am not so absolutely sure that these investigations which tell us with such cock-sureness that iodine is the chief cause of goiter and that the supplying of iodine in drinking water cures the goiter, are dependable. When health department men who are only trained in health department work make clinical examinations and claim that hundreds of children with goiters have been cured after they have had iodine administered to them in the city drinking water for three months, I doubt the accuracy of these observations. It takes mighty good training, long clinical experience, to determine definitely whether a goiter is smaller in three months than it was three months previously, particularly if the examinations are made on a wholesale scale.

I am thoroughly convinced from rather an extensive observation of goiter, that the question of lack of iodine is greatly overstressed. I do think it is one of the causes of goiter, but I am very doubtful whether it is even one of the major causes. I am convinced that hereditary syphilis plays a bigger part in goiter than we are likely to admit, and I think possibly that the giving of iodine in some of these cases

of goiter may be looked upon as antiluetic treatment and the cures explained in that way.

I had a very interesting experience about two years ago: a young lady about eighteen years of age with a very severe toxic goiter. After she had been under treatment about a year and had apparently recovered, the mother brought in her younger sister for a looking over, for a periodic health examination, and one of the very first things I noticed in this second daughter was Hutchinson's teeth. And while I had a relative cure in the first case, before I made the diagnosis of congenital syphilis in the second case, the minute I put the first girl on anti-luetic treatment her endurance and resistance improved fifty per cent more.

I just want to leave this thought with you. When you have cases of goiter and they are getting so much better with your Lugol's solution, just investigate and see if there is not congenital syphilis. I think you will find in a certain per cent of the cases your iodine is curing the syphilis and incidentally relieving the thyroid symptoms.

Dr. James H. Hutton: I was especially glad that Dr. Ochsner brought out some of the things he did. I had the physical and not the economic and social side of it in mind, but I think that is not to be overlooked.

I do not see that goiter is a public health problem. The government prohibits us from putting some things down our throats that perhaps some of us would like at times. Let us not permit the government, on the other hand, to compel us to take drugs that a considerable percentage of us do not want and whose virtue is open to question in any case.

Regarding reliability of statistics, I quite agree with Dr. Ochsner, and I think there is an increasing number of men who feel the same way. I question the results, the statements and the deductions that have been drawn from them.

I tried to emphasize as I went along the fact that we do not know a lot of things about goiter and that consequently we had no right to use iodine indiscriminately in its treatment.

Our knowledge regarding the etiology of goiter is far from final and complete. We know that the thyroid is intimately concerned in the iodine metabolism of the body but we do not know exactly what it does in this connection. We know also that goiter has some relation to the iodine content of the gland. We do not know exactly what that relation is. We do not know why one thyroid should enlarge diffusely and symmetrically without signs of hyperthyroidism and another enlarge diffusely and symmetrically and be accompanied by the most violent symptoms of hyperthyroidism. We do not know why another gland undergoes adenomatous enlargement without signs of hyperthyroidism or why this adenomatous goiter later takes on signs of hyperthyroidism. We do know that iodine will, in many cases, change the adenoma without hyperthyroidism into the same form with hyperthyroidism more quickly than almost any other agency we have at our command. Until we know more about these phases of the question it seems we should be

slow about using iodine in a widespread indiscriminate manner compelling a lot of people to take it who do not want it and some of whom may be made worse by it.

A CASE OF SPONTANEOUS PNEUMOTHORAX OCCURRING IN THE UNTREATED LUNG DURING THE COURSE OF ARTIFICIAL PNEUMOTHORAX, WITH COMPLETE RECOVERY*

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The occurrence of spontaneous pneumothorax in the treated lung is not uncommon as has been shown by Bronfin¹, who recently reported a series of cases in which this accident occurred during the course of artificial pneumothorax. But spontaneous pneumothorax in the untreated lung is rarely, if ever, met with as is evidenced by the fact that a brief review of the literature fails to disclose such a case on record.

The following case is one coming under my observation in which this accident occurred during the course of artificial pneumothorax.

CASE REPORT

F. G., female, aged 20 years, occupation, telephone operator. Family history—negative for tuberculosis; no history of previous illness.

History of Present Illness: The patient states that she was never sick until January 29, 1924, when she developed a productive cough which would not clear up. Shortly after the onset of this condition, the patient suffered from rise in temperature, night sweats, loss in weight, and marked weakness. She remained at home until March 14, 1924, when she was admitted to the Oak Forest Tuberculosis Hospital.

On admission the temperature ranged from 99 F. to 101.8 F. and the pulse rate between 96 and 118 per minute. The sputum was positive for tubercle bacilli—Gaffky III; weight 124 pounds.

General physical examination did not reveal any demonstrable disease other than pulmonary tuberculosis.

EXAMINATION OF THE CHEST

Inspection did not show any deformities of the chest. There was lagging on the right side above the third rib. The mobility on the left side was unimpaired.

Palpation: Tactile fremitus was increased over the upper part of the right chest but there was no noticeable change in the left.

Percussion: Impaired resonance throughout the right lung becoming dull at the level of the third rib and fifth dorsal spine. The diaphragmatic excursion was somewhat decreased over the right base. The resonance over the left lung was practically normal except for slight impairment above the third rib and fourth dorsal spine.

Auscultation: The right lung anteriorly showed diminished breath sounds from the base to the third rib with broncho-vesicular breathing above this point. Moist rales were elicited from base to apex following forced expiration and cough. Posteriorly, the breath sounds were bronchial in character from the sixth dorsal spine to the apex. Large, moist rales were elicited throughout, following forced expiration and cough.

In the left lung, the breathing was clear except for broncho-vesicular breathing above the second rib and fourth dorsal spine.

An x-ray plate, taken March 23, 1924, showed a mottling throughout the entire right lung, which the Roentgenologist believed to be of a tuberculous nature.

Diagnosis: Far advanced, active, pulmonary tuberculosis, involving the entire right lung with evidence of an old fibrosis in the upper part of the upper lobe of the left lung.

In view of the unilateral findings in this case, it was decided to induce pneumothorax and March 25 the treatment was begun.* A free pleural space was found and a manometer reading of Neg-2 to Neg-6 obtained. 300 c.c. of air were allowed to enter the pleural space at this installation and the manometer reading following this was Neg-1 to Neg-5½. Treatments were continued once a week thereafter and the amount of air given at each treatment ranged from 300 c.c. to 800 c.c. The temperature and pulse rate began to show a gradual decline shortly after treatment was begun, and in May, 1924, the temperature became normal and the pulse rate dropped to an average of 80 to 90 beats per minute.

An x-ray plate, taken May 15, 1924, showed the right lung to be completely collapsed. Frequent fluoroscopic examinations were made of the chest and June 21, 1924, the presence of fluid was noted in the right chest occupying the costo-phrenic angle, which was absorbed without treatment. The sputum became negative at this time and remained negative during the entire time the patient was in the Institution. No change in weight was noted until September, 1924, when the patient began gaining rapidly and continued to gain until discharged from the Institution.

Frequent fluoroscopic examinations were made during the course of treatment, and an increasing amount of fluid was noted in the right thorax. An x-ray plate taken January 15, 1925, showed the fluid to be at the level of the sixth rib. Under continued fluoroscopic examinations the usual fluctuation seen in cases with sero-pneumothorax was noted and from time to time the fluid was almost absorbed.

Up to this time, the patient had been doing well

*Read before the Chicago Tuberculosis Society, February 11, 1926.

1. Bronfin, I. D.: Spontaneous Pneumothorax during the course of Artificial Pneumothorax. American Review of Tuberculosis. ix, 346-363, June, 1924.

*I wish to express my appreciation of the able assistance rendered by Dr. R. G. Bell, Assistant Medical Director, in preparing the record in this case.



Fig. 1 shows the beginning collapse at the apex of the left lung with recurrence of fluid in the right base.

and nothing of an unusual nature had been noted in the left lung. However, during a fluroscopic examination, March 7, 1925, a line was observed in the left lung beginning at the level of the second rib extending from the midline toward the upper and lateral aspect of the chest. An x-ray plate (Fig. 1) taken at this time, showed the same condition as seen on fluroscopic examination, denoting beginning collapse of the left apex with a small amount of fluid in the right base. An x-ray plate (Fig. 2) taken March 14 showed the collapse to be more extensive and the presence of a small amount of fluid was noted in the region of the mediastinum occupying the angle formed by an adhesion beginning at the level of the third rib and extending downward and inward toward the midline posteriorly, and ending at about the level of the ninth dorsal spine. The right lung shows the fluid to have increased in amount.

Fearing that the left lung might become completely collapsed or that the air space might become filled with fluid, pneumothorax was discontinued.

At the time air was noted in the left thorax, the patient was questioned as to whether she had suffered from shortness of breath or pain in the left side, to which negative answers were given. The temperature and pulse remained normal during this episode and apparently no ill effects resulted from the accident. Frequent fluroscopic examinations were made after the presence of air and fluid were noticed, and absorption of both air and fluid took place gradually without any form of treatment.

An x-ray plate (Fig. 3) taken April 30, 1925, revealed the presence of fluid in the right chest reaching the level of the fifth rib. The left lung appeared

normal and there was no evidence of an air space in the previously collapsed area. Artificial pneumothorax was resumed June 9, 1925, and given at intervals of about one month, the amount at each insufflation ranging from 400 c.c. to 600 c.c.

The patient was discharged July 18, 1925, with advice, and at this time the records showed the temperature and pulse to be normal and the sputum negative for tubercle bacilli. The weight was 156 pounds, a total gain of thirty-two pounds.

During the time between July 18 and the date of this writing the patient has been coming to the Institution every two weeks for examination and refills. She has held her weight; has had no rise in temperature, no cough, and sputum analysis is negative for tubercle bacilli. Fluroscopic examination shows the left lung to be in good condition and the right lung completely collapsed. There is a small amount of fluid in the right thorax occupying the costo-phrenic angle.

Pulmonary tuberculosis ranks first among diseases of the lungs as an exciting cause of spontaneous pneumothorax; abscess, bronchiectasis, emphysema and empyema are also exciting factors in producing this condition.

Spontaneous pneumothorax may be complete or partial depending upon the size and nature of the perforation and extent of adhesions. The symptoms which attend the occurrence of spontaneous pneumothorax vary according to the rapidity of the onset and the extent of collapse. In cases with a sudden onset in which the lung

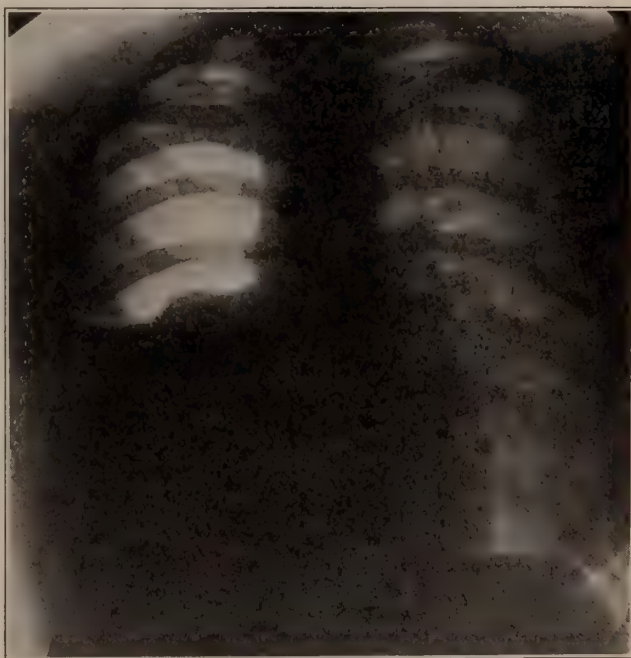


Fig. 2 shows a more extensive collapse of the left apex with a small amount of fluid. The fluid increased in the right base.

is rapidly and extensively collapsed, the patient will suffer from severe pain, dyspnea, and increased pulse rate. In many instances death may ensue within a few hours unless relief of respiratory embarrassment is given by reducing



Fig. 3—The air and fluid in the left lung has been completely absorbed.

intra-thoracic pressure through aspiration of air. However, in many cases with an insidious onset, the symptoms are mild or may be entirely absent as in the case here reported.

The adhesion noted in this case was apparently attached at its lower border, forming a space somewhat triangular in shape with the base up and the apex down, which accounts for the position of the fluid in the left thorax. This is in contradistinction to the spaces which usually form at the base of the lung in pleurisy with effusion and sero-pneumothorax when the upper part of the lung is adherent.

Ethan A. Gray² states that spontaneous pneumothorax can and does occur without symptoms of pain, shock, or dyspnea. He cites cases coming under his observation where the discovery of the condition was made by the patient who detected the splash in the pneumothorax cavity after fluid had formed.

Rupture of the mediastinum is to be thought of in connection with this case, but the condition is very uncommon and when occurring is

attended with pain, dyspnea and symptoms of shock. In this case, the intrathoracic pressure was not increased sufficiently to produce a displacement of the mediastinum. This is shown by the fact that at no time during the course of treatment was the manometer reading more than positive one-half and the records show that such a positive reading was obtained only once during the entire time the patient was under treatment. The x-ray plates and fluoroscopic examinations did not reveal displacement of the mediastinum at any time. Careful physical examinations were made at the time this accident occurred and no evidence of displacement of the mediastinum was noted.

In concluding this report, it may be said that had the lung been free from adhesions it would probably have been completely collapsed, which would have been fatal in this case. The absorption of the air and fluid merely follows the incidence of a certain percentage of cases in which fluid and air are absorbed without treatment.

2. Gray, Ethan A.: Medical director, Chicago Fresh Air Hospital. Personal communication.

CONCLUSIONS

1. Spontaneous pneumothorax can occur in the untreated lung during the course of artificial pneumothorax without causing symptoms.
2. It is advisable to make frequent fluoroscopic examinations of patients who are receiving artificial pneumothorax.
3. This case illustrates that the lung may be completely collapsed while manometer readings will show a strong negative pressure. Therefore, when the lung is shown under the fluoroscope to be in a state of complete collapse, the pressure should not be increased to the extent of producing a positive manometer reading.

THE COURSE OF PULMONARY TUBERCULOSIS AS INFLUENCED BY NON-THORACIC SURGERY*

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By way of introduction the writer would state that the material for this paper and its plan of presentation are not the results of an idea conceived in the abstract, along definite lines of development and elaborated along those lines into a finished product. Rather, it is the out-

*Read before the Chicago Medical Society, March 3, 1926.

growth of experiences not foreseen or conjectured at the time of its inception.

In the Fall of 1920 I found myself in charge of a hospital of some 1,200 tuberculous patients. I had taken into this work ideas which had developed from a comprehensive experience in dispensary, sanatorium and private practice. Joined with this was rather a broad knowledge of the extent to which tuberculosis enters into public health problems. The idea to which I especially refer, is that, in the main, surgical operations except when imperatively indicated for their direct action on the tuberculous processes, are to be avoided. We shall see that these conceptions were soon to undergo marked modification.

Shortly after the assumption of my duties as Medical Director my attention was called to a patient in the advanced stage of pulmonary tuberculosis, complicated by an ankylosed knee. The deformity was marked and the general contour of the leg such that constant distress prevented him from being made comfortable in his bed. Extreme weakness and emaciation, sleeplessness and deformity precluded the possibility of relief for any considerable time, by change of posture or other means. The lad implored me to amputate his leg, and I exerted all my persuasive powers to dissuade him, even to the extent of stating that to amputate would probably shorten his life. His reply was quick and to the point: "I prefer to die, rather than to suffer as I do." Upon the repeated reiteration of this declaration, I finally consented. We were rewarded by a progressive and rapid improvement in his tuberculous condition. He soon was able to leave his bed, and, with the aid of a crutch, to go and come about the grounds. This condition continued for some 23 months, at which time he left the hospital and passed from further observation. This experience was followed by others which, although not the same, were like it, and the results were generally as satisfactory. Naturally, we were led to serious reflections upon the matter of operations upon the tuberculous, in general, and a wider application of surgery where and when indicated in its therapy. I hope to show that this attitude is justified by results.

The current literature is replete with many excellent papers detailing the benefits that may be expected in the treatment of the otherwise hopeless consumptive by *thoracic surgery*. Great

progress has been made by operators, following the pioneer work of Brower, Wilms, Sauerbruch, Davis, Archibald, Freeman, Wiley and Hedblom, to name a few of the prominent advocates who come readily to mind, and it has been demonstrated beyond any doubt that thoracic surgery has a field equal in importance, if less in applicability, to the hygienic and dietetic measures sponsored by Buffington, Dettweiler, Brehmner and their followers.

Now, it is not the purpose of the writer to discuss the matter of thoracic surgery. The title of this paper clearly states that we shall deal with the treatment of pulmonary tuberculosis by surgical means other than thoracic, and is intended to imply a medical rather than surgical review. We may consider it as an evaluation of some three hundred operations upon the tuberculous in the three classifications, as formulated by the National Tuberculosis Association, and an equal number of control cases not operated upon. Forty-seven have been chosen from my private practice,—patients undergoing treatment within their homes. It should be said, moreover, that these home conditions were favorable, both as to the intelligent co-operation of the individual and his financial status. I hope to show that surgical operation may be undertaken in the tuberculous without undue hazard, and that great benefit may be derived, providing one selects his cases carefully, his anesthetic judiciously, has an operator of unquestioned skill and surgical judgment, and is fully cognizant of the supreme importance of *post-operative care and environment*, for I verily believe that the excellent end results that I am herein able to show were attained only by keeping before us clearly the supreme importance of this latter phase. The best technical skill, the wisest selection of cases, the most profound surgical judgment can be brought to naught through neglect of these essentials. I would emphasize: (1) Surgeons should guard against the too early discharge of their patients from their service; (2) Physicians should maintain close contact with their patients, even though they have assigned them temporarily to the surgeon's care. It is asking too much of the operator to be both surgeon and physician. The successful treatment of tuberculosis requires a strict observance of details. These assume great importance, and it is as

unreasonable to expect the surgeon to be conversant with them, as it would be to expect the physician to possess a like knowledge in the surgical field. It is only by the closest co-operation that the best results can be obtained. Lastly the patient should be retained in convalescence over an ample period under medical supervision. It is folly to discharge these patients as no longer in need of medical care for no other reason than that they have recovered from their surgical disability. They should be discharged to the sanatorium or to their homes where the treatment should be carried on under proper supervision and over the necessary period of time.

In no other disease do major operations assume more importance or demand more careful consideration than in consumption—chronic, progressive, and wasting. Crile expresses the idea thus: "As for surgical treatment in the presence of coincident chronic disease such as phthisis . . . operation is not contra-indicated, *but the plan of management must be adapted to the condition of the individual case.*"¹

What are the factors that decide for or against operation in a given case? They are—First: Is there reason to believe that the proposed operation will afford sufficient relief to warrant the hazard? Second: Does the operator possess the requisite skill and judgment? Scores of surgeons have operative dexterity and skill to one who combines with these qualities that of good judgment. The writer has seen the tide turned against the patient because the operator's consciousness of his skill and dexterity has overweighed his judgment. I recall some years ago hearing one of our noted physicians state in this room that he often found great difficulty in restraining surgeons from doing *too* much. Yount states it succinctly in these words: "Operations on the tuberculous require the most scientific exactitude, with highest surgical skill."² Doubtless the great success of thoracoplasty is due to the multiple-stage operations—in other words, not doing too much. And, of course, it is equally futile to do too little.

In a chronic disease extending over a number of years, one is not exempted from the vicissitudes of affliction other than those of his major

disability. It is, therefore, not surprising that records disclose the frequent complications of intercurrent disease. Close scrutiny of those of surgical import reveals that the greater number of operations were for the relief of abdominal complications. About 85 per cent. of the cases that I have assigned for surgical intervention have been for abdominal section. Not often does progressive ulcerative pulmonary tuberculosis run its course free from pain in the lower right quadrant and the epigastrium. The predilection of the tubercle bacillus for invasion of the ileocecal region is common knowledge, and it is a truism that the course of pulmonary tuberculosis is marked by one dyspeptic attack after another. These dyspeptic attacks may simulate the symptoms of gastric ulcer in many respects, but unfortunately, do not respond as kindly to medical therapy as in non-tuberculous cases. This is due, I imagine, to the low tonus of the tuberculous, or possibly to visceral congestion induced by a failing myocardium. Incidentally you may recall the work of Braithwaite, of Leeds, who traced an aberrant pathway, marked by pigmented tuberculous glands, from the iliac fossa to the pylorus.

From what has been said concerning the predilection of the tubercle bacillus for the right ileocecal quadrant, one would expect appendicitis to be a common complication. It is—as evidenced by the fact that 55 per cent. of the operations which form the basis of this study are for the relief of this affliction. But, tuberculous complications in this region may not involve the appendix even though the symptoms closely simulate appendicitis. A differential diagnosis may be quite impossible.

I would remark, however, that a true tuberculous appendix is seldom acute; the symptoms indicate a low grade inflammatory reaction, in no way distinguishable from chronic appendicitis as we observe it in non-tuberculous patients. The blood count does not help in the differentiation, and one cannot determine definitely whether the pain is due to an actually inflamed appendix or tuberculous inflammation of the surrounding and adjacent tissues. Contributory evidence may frequently be revealed by the x-ray, and its aid should be invoked whenever feasible. After all, this resolves itself into an academic discussion of differential diagnosis. The prac-

1. G. W. Crile, speaking before the Radiological Society of North America, at Cleveland, Dec., 1925.

2. C. E. Yount: Am. Jour. Surg., Anes. Supp., Jan., 1923.

tical point is that the patient must be relieved and this is attained by opening the abdomen.

In a previous article Nordby and the writer stated four cardinal points which we believed justified this. They were: 1. Pain which (a) seriously interfered with convalescence, or (b) required the extended administration of anodynes; 2. Perforations; 3. Malnutrition amenable to surgical correction; 4. Profound toxemia directly or indirectly attributable to malnutrition as the fundamental cause.

Other than the 85 per cent abdominal sections, previously referred to, the remaining 15 per cent comprise bone lesions, orchiectomies, phrenicotomies of which there were four, etc. Leaving out for the present the appendectomies, 30 per cent. were made up of various abdominal sections, colostomies, gastro-enterostomies, hysterectomies, gastro-duodenostomies, cholecystectomies, cholecystotomies, herniotomies, enterectomies, etc.

In comparing the cases operated upon with those not operated upon, and covering the three divisions of the classification, minimal, moderately advanced, and advanced, and judging by the usual criteria of temperature, pulse, gain in weight, presence or absence of positive sputum, we find that 50 per cent. of these cases which were stationary before operation, showed improvement after, and 90 per cent. of the cases which were retrogressing before operation, showed distinct improvement after operation. This may give an idea of how these disabilities were influencing the course of the disease. It is well to state—it will bear repetition—that most of these patients were confined to their beds for long periods prior to operation and thereafter.

I have left until the last for separate mention the operation of phrenicotomy. This operation, first suggested by Stuertz, has gone relatively neglected. Search of many of the major surgical works yields no mention of it; a few condemn it, I might say, by faint praise. Of four of my cases in which the operation has been performed, two yielded satisfactory results. In one of the remaining cases, the course continued its downward direction. In the fourth there has been no marked change; from which I conclude, there has been no benefit. The operation is readily performed, although locating the nerve is not always as easy as one might imagine. Use

novocain as the local anesthetic. Incise about a finger's breadth back of the sternocleidomastoid and about two fingers' breadth above the clavicle. I usually locate the nerve lying behind and between the two transverse cervical arteries. It will be found lying on the fascia and covered with a thick layer of fat and areolar tissue. Make sure of the identification of the nerve by following it down to the point where it passes behind the clavicle at its inner end and resect about ten centimeters or more. You may have paresthesias of the trapezius and pectoral muscles, but these soon pass off.

There are some differences of opinion regarding the merits of various anesthetics to be used upon the tuberculous. I have leaned to the use of novocain wherever possible. With it, some operators seem to be more successful in securing analgesia and relaxation than others. My next choice, from the standpoint of the patient, would be nitrous oxide and oxygen, and in this I am in accord with Archibald, Crile, Freeman and Hedblom. I note that Sauerbruch claims special advantages for ether. I have observed but one exhibition of ethylene gas, and that very recently. I was pleased with its effect and equally so with the work of the surgeon, and have been unable to determine any deleterious effect as revealed either by physical signs or symptoms.

In bringing this subject to a close, I would point out that the excellent results which I have here endeavored to show are not due entirely to the correction of disabilities by the surgeon, but that general hygienic treatment and prolonged rest have undoubtedly been important factors. At the completion of the surgical service these patients immediately passed under close prolonged medical and nursing supervision, in their homes or in sanatoria. This close supervision oftentimes extended into many months. It is only by so doing that you can hope to attain like satisfactory results, and, moreover, you may expect to attain these results to just the degree with which you approximate the conditions under which this work was conducted.

By way of summary I would invite your attention to the following tabulations:

Tabulation I

Comparison according to weight: At first examination and three months prior to operation.

Operated Upon		Not Operated Upon	
Stationary	43%	Stationary	20%
Increased	28%	Increased	30%
Lost	29%	Lost	50%

Weight three months after operation compared to weight three months prior to operation.

Retrogressed	28%
Stationary	25%
Improved	47%

Tabulation II

Comparisons according to Anatomical Involvement, regarding Pulmonary Tuberculosis, but not sufficient to warrant a change in Classification. In this series the cases were classified three months prior to operation, as follows:

Operated Upon		Not Operated Upon	
Stationary	65%	Stationary	3%
Improved	25%	Improved	24%
Retrogressed	10%	Retrogressed	73%

As compared to clinical condition at time of initial examination.

Three months after operation the same cases in this series were classified as follows:

Stationary	7%
Improved	88%
Retrogressed	5%

As compared to clinical condition three months prior to operation.

Tabulation III

Forty-seven private patients, under excellent home conditions, from three months prior to operation to six months after operation.

Stationary	29%
Improved	66%
Retrogressed	5%

These patients remained in the hospital, after operation, three months on the average, after which period they were returned to their homes, where they remained under medical supervision for a minimum of eleven months.

Tabulation IV

Of four cases stationary in Table III, after operation, one still holds her improvement—18 months.

Of 10 cases improving before operation, three retrogressed after operation.

Of 26 cases retrogressing before operation, nine improved after operation; 17 are unimproved and slowly failing.

These 40 cases were in the advanced stage of Pulmonary Tuberculosis. Involvement: more than one lobe with cavity formation and progressive ulceration. Since these data were compiled, three of the patients have died.

SUMMARY

The conclusions I draw are as follows:

1. That my experience has demonstrated that the prejudice formerly so strong—but now happily passing—against operating in active cases of pulmonary tuberculosis, is unwarranted.
2. That operations on the tuberculosis may be undertaken under proper conditions of selectivity, adequate surgical skill, knowledge, and wisdom without undue hazard.
3. That operation may frequently lead to prolongation of life, if not, indeed, to recovery,

and certainly may add greatly to the comfort of the patient.

25 E. Washington St.

THE RADIATION TREATMENT OF EXOPHTHALMIC GOITER*

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In undertaking to treat exophthalmic goiter we should consider medical, surgical and radiation therapy. As the etiology of the condition is still unknown, we must attack it symptomatically and with regard to what is known of the pathology. All sources of infection should be removed and a prompt reduction in symptoms must be secured because of the degenerative changes that are prone to take place in the heart. Complete physiologic rest is of great importance. Our main efforts, however, must be directed at something which will decrease the vascularity or destroy the newly formed cells in the thyroid which are producing the altered secretion mainly responsible for the symptoms. This can be effectively accomplished by surgery, radium or x-rays.

ACTION OF RADIATION

When we consider the pathology of exophthalmic goiter and the action of radium and x-rays, they seem to have a definite place as remedial agents. We should bear in mind that there is a proliferation of glandular cells of the thyroid, deposits of lymph tissue throughout the organ, in addition to an enlarged, active thymus and lymph nodes in about one-half of the cases. Therefore, the disease is apparently *not* confined entirely to the thyroid. If surgery be done a diseased portion of the gland is removed and healthy thyroid tissue also taken away. In the portion left behind, certain of the diseased elements remain to often cause further trouble and perhaps to again proliferate when the strain for caring for the body is thrown upon the small remaining amount of normal thyroid tissue, also the thymus gland is not operated upon. There is a hyperplasia of the arteries which has been attacked by ligation, but this does not distribute the blocking process evenly through the gland. Radium or x-rays possesses the ability to kill a diseased cell or a new growth cell when several times the same

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dose would be necessary to kill a normal adult cell. Also when applied to a blood-vessel there is a swelling of the tunica intima followed by an obliterative endarteritis in the smaller vessels and diminution of the caliber of the larger ones. Now whether the toxic secretion of the thyroid in these cases be due to the additional blood supply or to the activity of the new formed cells in the gland, or to both, it will be affected by radiation. There is this further advantage in using radium or x-rays, that while diffuse action over the entire gland will eliminate the toxic cells, yet the normal healthy tissue will be left untouched provided the dosage can be accurately estimated. Further the blood supply will be reduced much more evenly throughout the gland than can be done by ligation of some of the thyroid arteries.

Radiation can be used not only on a case suitable for surgery, but on cases where the surgeon is compelled to decline to operate and even on cases where the surgeon has operated and failed. The thymus and lymphatic system can be, and are, rayed, which may explain the success of radiation where operative removal of a part of the thyroid has not been successful.

Soiland¹ states, "It is not the intention of the writer to decry surgery, or to detract one iota from the many brilliant results obtained by competent operators, but the fact must not be lost sight of that in radiation we have a proved therapeutic agent, far superior to any other given us up to the present time. The oft repeated statement that radiation over any field creates so much vascularity, or produces so many adhesions that surgery is rendered more difficult is entirely false. Radiation always diminishes vascularity in any region where it is applied long enough to have its obliterating effect on the arterioles established, and this is the essential status required in the successful termination of toxicity in this variety of goiter. There is surely no longer any excuse for denying a patient the use of this remedy, which if not successful, has at least prepared the way for possible surgery."

Dr. Soiland's statement should be qualified in that multiple raying of the thyroid with large doses over a prolonged period of time will make operation more difficult because of the resulting fibrosis. However, there is little excuse for such treatment. The proper treatment requires com-

paratively few and medium doses. The metabolism and pulse rate usually return to normal after six to eight x-ray treatments have been given over a period of about six months. If x-ray therapy is prescribed and four treatments are given at three-week intervals, and the patient has not shown definite clinical improvement, nothing is to be gained by further treatment and the surgeon can operate on the goiter without any attending difficulties as a result of this previous radiation.

No less of an eminent surgeon than Crile² has shown that x-ray therapy in hyperthyroidism reduces the basal metabolism more than ligation. However, in fairness to Crile it should also be stated that he contends that bilateral partial thyroidectomy reduces the metabolism more markedly than x-ray therapy.

In the final analysis, therefore, the rational therapy of the present day in most cases of exophthalmic goiter rests between surgery and radiation therapy. That these methods of treatment will continue to hold first choice as therapeutic agents in the control of this disease seems evident—or until the etiology of the condition has been discovered. These methods are empirical and are directed to decrease the activity of an overactive gland. But what causes the hyper-function or altered function of the thyroid? This, future research must reveal.

SURGERY VERSUS RADIATION

The general practitioner, in whose hands practically all cases of exophthalmic goiter first come, and who should make the diagnosis in the average case, must decide whether to refer the patient to a surgeon or a radiologist. Let us, then, briefly consider what these specialists and their methods of treatment have to offer. The surgical treatment of exophthalmic goiter has made great progress in recent years. The serious objection to it has been the operative mortality. In the hands of the best surgeons, who have given the disease special study, this operative mortality has been steadily decreased until now it is less than 2 per cent. However, all patients cannot be operated on by the comparatively few surgeons specializing in the surgical treatment of this condition. The success or failure of any surgical method must be judged largely by what

the average surgeon can accomplish. What is the operative mortality in exophthalmic goiter among the average general surgeons of this country? Unfortunately, statistics are not available to answer this question accurately, but we believe we are safe in saying it is nearly 10 per cent.

What has radiation therapy to offer in exophthalmic goiter? This is best appreciated by comparing its advantages over the surgical treatment. These are as follows: 1. There is no mortality. 2. There is no resulting scar or hospitalization. 3. It is painless and causes very little inconvenience to the patient. 4. It does not interfere with the patient's occupation. 5. The thymus can be treated which is impractical to attack surgically. 6. Surgery, in removing proliferating cells leaves others behind, and by ligating, still leaves some of the blood supply more or less undisturbed. The selective action of radium or x-rays to a much greater degree destroys the harmful cells, but does not disturb the normal cells. It also causes a much more symmetrical diminution of the blood supply. 7. It can be used in cases where surgery fears to venture or has failed. 8. If not entirely successful, an operation can be performed with less danger because of the favorable action of the rays on the thymus.

Providing the patient survives the operation, what are the results of the surgical treatment compared to the radiation treatment of exophthalmic goiter? Let us be honest and frankly admit that neither treatment is a specific. There are probably but few good surgeons who have not operated upon patients who failed to respond to radiation therapy and certainly most radiologists have treated surgical failures. As near as a careful analysis of statistics will permit, the end-results of the surgical and radiation treatment of exophthalmic goiter are practically the same, that is, from 65 to 75 per cent of the cases are clinically cured as a result of the treatment. Simpson,³ in comparing the results of surgery and x-rays in this condition states, "As to the permanency of results, I believe it (x-rays) compares very well with surgery and many of my cures are of more than ten years' duration. A goodly proportion, more than 8 per cent. of my patients, had from one to three operations, with a return of all the

symptoms, including the tumor. Irradiating the thymus alone in some of these surgical failures will give brilliant results. The truth of the matter is that the surgeons probably get our failures and operate on them, at times with a permanent cure, while those of the surgeons' failures which escape the undertakers come to us, and we, in a majority of instances, effect a cure with x-ray."

CONCLUSION

In view of the above, what should be the attitude of the general practitioner in referring a patient with exophthalmic goiter? If he decides to have his patient operated upon he takes less chances when he refers the case to a competent surgeon who has adopted a special standardized technique for handling these patients. If this is not convenient or practical, he should refer the patient to a competent radiologist. The general practitioner in deciding this question should keep two things in mind: First, there is no mortality in the radiation treatment of exophthalmic goiter, and second, the end-results of radiation therapy are practically the same as the surgical treatment in the majority of cases.

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DIATHERMY IN THE REMOVAL OF TONSILS

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The question of diathermy in the removal of tonsils has occasioned heretofore considerable conflict of professional opinion. It is hoped that this report on a series of one hundred and fifty cases will further illuminate and stimulate interest in the problem.

All cases in this series were operated on under a simple method of local anesthesia to be described later. In the series no fatality nor near fatality occurred, though included were a number of cases which might have been regarded as either unsuited for the method or as bad surgical risks.

A bad risk type of case for example was Mrs. K. J., aged 55 years. The tonsils were spongy and badly diseased and there was a complicating nephritis. The general physical condition was so poor that it was deemed wise to coagulate each tonsil separately with a time interval of three weeks between sittings. Complete recovery from the operation and the nephritic complications and restoration to vigorous health were the end results obtained.

One patient, Mrs. M. O., was a hyperthyroid type. Another, Miss J. K., had an endocarditis. Two patients operated on were over sixty years of age. Of children operated on, one was eight; one, nine; and two thirteen years of age. Two patients, Mr. P. K., and Miss L. S., had buried fibrous tonsils which had been acutely reddened and inflamed for a period of two and three months respectively. Coagulation was resorted to here with the idea of destroying completely and at once both the tonsils and the infection harbored in them. Speedy and uncomplicated recoveries occurred.

With the diathermy operation there is no primary hemorrhage. Thus a big danger of the cutting operation is avoided. Also is avoided the danger of septic aspiration into the lungs.

On an average of one case in five there occurs a slight secondary hemorrhage at the time of the separation of the slough. This is never severe, amounting only to a capillary oozing and is controlled by swabbing in the tonsillar fossae with Comp. Tr. Benzoin. Noteworthy after the operation is the freedom of the patient from any mental or physical shock. He smiles and is full of vigor as he walks out of the office.

After a latent interval of from six to seven hours after the operation, during which time no physical disturbance has served to mar smoothness in the course of events, a reaction usually sets in. This is at its height during the next twelve hours and has mostly subsided at the end of the next twenty-four. It is manifested pathologically by redness and swelling of the peritonsillar tissues and of the uvula and soft palate; symptomatically by pain, difficulty of speech and swallowing, and occasionally difficult respiration. After the reaction subsides, convalescence is easy. The necrosed tonsil remains clean and separates piecemeal in the interval between the sixth and seventh day and is either swallowed or expectorated.

Summarizing—A shortened period of operative disability with distress symptoms at no time worse than those encountered after surgical enucleation is the rule with diathermy. The extremely severe and prolonged inflammatory and edematous reactions described by others, have not occurred in the author's experience. Such effects are believed to be the results of thermal overdosage or other errors in technique. This brings us to the question of what is the correct technique.

Any dogmatic statement on this point is difficult. In attempting to come to an opinion it is necessary that the mechanical contrivances and physical principles involved in diathermy operations be thoroughly understood. In the early stage of one's experience this understanding is best arrived at by numerous coagulating experiments on pieces of beef. The effects obtained in this way are equal and analogous to those obtained on human beings.

Diathermy work on tonsils requires the use of:

1st—An efficient machine.

2nd—A correct type of current.

3rd—Suitable electrodes.

4th—Proper dosage.

5th—A suitable anesthetic.

Referring to the first item mentioned, the machine to be used should be resonant, of ample capacity and fitted with an accurately controllable spark gap. To be resonant, assuming the proper process of manufacture, it is necessary that the Leyden jars be kept filled with salt solution to the proper level, that the transformer if of the oil immersed type, be full of oil and that the points of the spark gap are clean. A foot switch is a necessary adjunct.

Referring to the matter of choice of a correct type of current, we are all aware of the effectiveness of an application of the d'Arsonval current in producing tissue necrosis. Not all of us are so familiar with the action of the Tesla current; by Tesla, meaning that current which is taken from the single so-called unipolar outlet as provided on all high frequency machines.

Fulguration refers to the destructive action on tissue resulting from the actual passing of Tesla sparks. There is a tonsil electrode or fulgurator being sold which consists essentially of an insulated handle and a needle fixed in the center of, and extending to a distance of about one-

fourth of an inch from the open flanged extremity of a hollow glass tube. Thus actual sparks are played on the tissue, and their field of action can be controlled. Fulguration has been advocated as a method to reduce rather than to completely remove the tonsils at one sitting.

Dr. Wm. L. Clark of Philadelphia has first described what is known as the desiccation method of removing tonsils. Clark's method has been to use an ordinary knitting needle held in an insulated handle, the point of the needle being actually inserted into the tonsil. The Tesla current is the one employed. The advantages of desiccation over fulguration are, first, deeper penetration of necrosis, and second, causation of less pain.

The term "Coagulation" refers to that necrosis of tissue which follows from the action of the d'Arsonval current. Using the same electrode and the same setting of rheostat and spark gap and actual contact of the electrode with the tissue, the d'Arsonval current produces much more heat than the Tesla, therefore a more ready necrosis; naturally also a greater spread of heat and necrosis, and the formation also of a relatively large so-called perithermic zone of extreme tissue irritation and semi-devitalization. Using the Tesla current it is found that one can more readily produce effects that are sharply localized and between the coagulated and the uncoagulated zone, a line of demarkation that is sharply defined.

Further observation shows a very moist succulent condition of the tissues in the zone of the d'Arsonval coagulation and a relatively dry condition in that of the Tesla. This finding has its simile in the experience of the ordinary cook who knows that by subjecting a steak, for instance, to a short intense heat it retains its juice and flavor, while a long and slower frying dries it out.

In the light of this simple fact we can understand the excessive edema that follows d'Arsonval coagulation. This edema in its nature must be regarded as: (a) primary, the immediate result of the severe insult to tissue cells, with an outpouring from the cells of fluid into the tissue spaces, and (b) secondary, this free moisture accumulation favoring the further spread of thermal irritative effects into a wide area of adjacent tissue.

Therefore, it is easier to avoid reaction by using the Tesla rather than the d'Arsonval current. However, whichever current is employed, it is necessary to use that minimum strength of current that will give just sufficient intensity of heat to coagulate, and the smallest possible size diameter of electrode that will do the work. It is well known that the smaller the active as compared with the indifferent electrode the more sharply circumscribed becomes the heat in relation to the former. On this account, while the use of a fine needle electrode would be quite safe, the use of a thicker one would be more dangerous, and the use of a button electrode might easily entail serious consequences. The use of an electrode with a small terminal contact whether on the surface or in the depth naturally requires a greater number of current applications in a greater number of positions. This again is an advantage, as one may readily assume that less reaction will follow from smaller and divided doses than from one or two tremendous thermal shocks.

Another point to be noted is this. The heat of a diathermy current generating in tissue in the vicinity of a single active pole, travels readily with but not across fascial planes. Experimenting on pieces of beef that contain fascia will demonstrate this beautifully. Heat generated within the tonsil therefore readily spreads up to but not so readily beyond the fascia of its capsule. The vulnerable area is at the margin of the tonsils where capsule, free tonsil surface and mucous membrane of the pillars meet. The operator should watch carefully the limit of the blanching of the tissues as denoting the amount that has been coagulated and not override the pillars. When the pillars are involved, heat is conducted freely through the submucous tissues to the soft palate and the uvula, causing subsequent reaction and edema. From what has been said one may anticipate that with small buried tonsils, on account of the difficulty of keeping entirely clear of the pillars, one is more apt to get reaction than when operating on those of a more hypertrophied type. This is in correspondence with the facts.

Referring to the third item that was mentioned for our consideration, namely, designing of suitable electrodes, the author has devised two varieties of a special copper tip for insertion in a

straight insulated holder. These tips are bent to a thirty degree curve which enables the operator working ambidextrously, that is with the instrument held in the right hand for the right tonsil and vice versa, to most easily reach all parts of the area to be destroyed. One of these tips is intended for surface applications only, and by having two grooves at right angles filed into the extremity it is provided with four short teeth which prevent slipping. This can be used successfully on very thin tonsils. The second of the tips is provided with two thin prongs each about one-third of an inch in length and separated by a distance of a little more than one-eighth of an inch; this is intended for insertion into various parts of the depth of tonsils that are of the thicker variety. It is immaterial that the length of the points be made to vary in accordance with the thickness of the tonsils to be operated on. Points of the length mentioned are used and for a tonsil that is thinner the points are plunged in until the resistance of the capsule is felt. If a much hypertrophied tonsil appears to be thicker than the length of the points, the operator can vary the strength of current and the duration of its application as his judgment dictates in order to carry the necrosis down to the capsule.

The author has also devised a special insulated pillar retractor. The bent portion of this instrument at right angles to the shaft, may be hooked behind an obstructing anterior pillar enabling complete exposure of the tonsil. After the retractor is placed it is best held in position by an assistant standing behind the patient's head.

Referring to the fourth item that was mentioned for our consideration, namely, proper dosage; it is desirable as has been suggested before to use a strength of current that will not coagulate too rapidly. The setting of rheostat and spark gap should be determined for the individual machine by experimenting on surgically excised tonsils or pieces of beef. The author, working with a model of machine having a five button rheostat control, uses the third button, with very large tonsils the fourth button of the rheostat, and one-quarter of a turn on the main control of the spark gap.

The mode of procedure for the operation is as follows:

1. The patient sits in a chair facing the operator.

2. For the indifferent pole a plate of block tin about four by eight inches is held firmly to the patient's back by an elastic bandage. From the plate an insulated cord leads to one of the d'Arsonval terminals through the milliammeter.

3. The tonsil electrode is connected with the Tesla outlet by a light and flexible cord.

The meter with current running under the above conditions will register about four hundred milliamperes.

Regarding the choice of an anesthetic, in as far as the tonsils are not a sensitive portion of the anatomy in any event, also in view of the fact that coagulation of tissue is not a very painful procedure a simple local anesthetic is all that is ever necessary. If on account of a child's timidity, general anesthesia is deemed requisite, hospitalization and skilled surgical enucleation is the better procedure.

The use of a needle and syringe for the purpose of bringing about infiltration anesthesia, is not advisable. In the first place mere topical applications are sufficient. In the second place the introduction of extra fluid into the tissue may do harm by favoring undue spread of heat and coagulative effects. It is the author's practice first with a rubber bulb powder blower to insufflate powdered anesthesine over the surface of the fauces and pharynx. This produces light surface anesthesia and reduces the pharyngeal reflexes. Secondly a metal applicator with curved tip wrapped in cotton, after being dipped successively into 1-1000 adrenalin and cocaine flakes, is used to swab over the tonsils and around their margins just inside the pillars. The whole anesthetizing procedure does not require more than two or three minutes of time after which the operation being proceeded with requires very little time additional.

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DIAGNOSIS OF THE SEVERE ABDOMINAL CRISES

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Under the term "Abdominal Crises," I have reference to these acute severe abdominal conditions which, if unaided by surgical means, are prone to end in death.

There are many surgical conditions in the abdomen to which unlimited time may be safely

given in arriving at a diagnosis. But there are others which necessitate the earliest possible consideration and conclusions. The responsibility in these acute cases is great and the physician first seeing the case realizes it. I feel that there are many hospital men who do not realize the handicaps under which the referring physician commonly labors. We possibly feel that at times we carry quite a responsibility, and so we do, but certainly not nearly so much as the family physician. It falls to his lot to determine what the condition is, whether it is medical or surgical, and if the latter, should it be immediate. It becomes his difficult job to convince the family of the urgency and many times knowing they stand ready to criticise and malign him in case of any possible error and particularly of any unsatisfactory result.

In the determination of whether or not a case is one of "Acute Crises" the following are all important.

1. Previous history of case.
2. The presence of four certain symptoms or signs. They are:
 - (a) Pain—sudden and severe.
 - (b) Nausea and vomiting.
 - (c) Tenderness.
 - (d) Rigidity.

The presence of these four items are almost vital in every case, and one is rarely able to make an absolute diagnosis without at least three of them.

There are three additional factors which are at time of much value. They are:

Temperature.

Blood Findings.

Special Diagnostic tests applicable to certain regions, such as fist percussion over kidneys, deep percussion over gall bladder, etc., but to which I will make no further reference. Permit me first to roughly analyze the above symptoms.

1. *Pain*: The typical abdominal crises pain is one that is severe and its onset sudden. It may originate in a part of the abdomen entirely distant from the diseased focus. In fact the majority of the acute abdominal pains whether of lower or upper abdominal pathology begins first in the epigastrium. Pain is usually dependent upon one or more of the following factors.

- (a) Infection.
- (b) Materials under tension.
- (c) Movement of foreign body in small duct.
- (d) Excessive spasm of the intestinal muscles.
- (e) Insult to the peritoneum.

The type and degree, the localization and radiation depend entirely upon the condition present.

2. *Nausea and vomiting*: They should come on shortly after the onset of pain. They are commonly of short duration, but a most important sign. Vomiting of abdominal origin may be due to

- (a) Reflex (an unsatisfactory term).
- (b) Infection on toxemia.
- (c) Obstruction to the continuity of the stomach and intestinal tract.

3. *Tenderness*: Usually at first only relatively localized—possibly largely to the upper or lower abdomen. If it becomes confined within a narrow field it becomes of great diagnostic aid.

4. *Rigidity of the Abdominal Wall*: Is a most important sign and particularly if quite localized. We must distinguish between the voluntary and involuntary rigidity as only the latter is of great value. Involuntary rigidity is due to the irritation of the parietal peritoneum, or the nerves supplying the wall, and is always present whether the patient's mind is on it or not, in contrast to that of the voluntary. The method of determination of the rigidity is most vital. The two hand palpation with the so-called "feather touch" is very instructive, but if attempted in a rough manner the test is without value. Whenever there is deep abdominal tenderness without muscular rigidity, the lesion likely does not involve the peritoneum. The disease then is likely to be extra-peritoneal, retro-intestinal or an irritation sufficiently distant from the anterior parietal peritoneum that a reaction does not result.

Temperature: A valuable but usually not an early symptom in most abdominal crises. It is generally the manifestation of absorption of infectious products which as a rule are under some tension. It is likely to be sub-normal in the early stages of acute ruptured extra uterine pregnancy and in acute pancreatitis, normal in uncomplicated gall stones and kidney stones, as well as in mechanical ileus until infection de-

velops, but almost invariably present in acute appendicitis.

Leukocytosis: Blood examination, although not usually practical in rural practice, is of no mean value. In interpreting our leucocyte findings we must have in mind a basic standard, and so we assume that leucocytes in excess of 10,000 per cubic millimeter and polynuclears exceeding 75 per cent. indicate a pathological condition. We may consider the total count as a gauge of the patient's resistance to infection and the polynuclear percentage as an index of the virulence of infection.

I wish now to make a practical application of the above symptoms in their order of importance to the individual conditions which might be classed under "Acute Abdominal Crises":—Of these I will mention acute appendicitis, ruptured tubal pregnancy, ruptured duodenal and gastric ulcers, acute pancreatitis and acute intestinal obstruction. Cholelithiasis, although complicated sometimes by gangrene, will not be included and neither will mesenteric embolism, etc., whose symptoms are somewhat indefinite and rarely diagnosed before operation unless a focal origin is demonstrable elsewhere in the body.

1. *Acute Appendicitis:* It presents a very definite sequence of symptoms which in their essential character are practically constant and uniform because they are the expression of definite pathology.

Pain: Sudden and severe. Usually referred primarily to the epigastrium.

Nausea and Vomiting: Usually within the first four hours.

Tenderness: Probably at first somewhat general or largely to right side but later quite definitely localized.

Temperature: Almost invariably present.

Leucocytosis: A valuable aid.

It is most important that the symptoms develop in the above order. If chill or temperature or vomiting precede the pain, the chance is very strong that it is not the appendix. This is easily explained when we consider the pathogenesis of the condition.

Infection almost invariably begins in the mucosa and on account of the inelastic fibrous coat the filled lumen cannot expand and the result is pain. Reflex vomiting follows and then sensitiveness due to the distension. Later ab-

sorption of the product under tension causes the temperature and leucocytosis.

Tenderness and rigidity are important factors, but rigidity is often questionable when the appendix is retrocecal, retro-peritoneal or extending up the lateral part of the cecum.

The temperature and leucocyte count are almost vital. Murphy stated that out of two thousand cases he found only three which presented no temperature, and only one without leucocytosis. The leucocyte count is of particular importance when temperature is slight or normal as usually the leucocyte count is relatively higher. But often in spite of a typical course a situation may develop early in the disease that may place the doctor in a quandary. The temperature and pain may disappear, and the physician may be unable to state whether the patient is rapidly recovering because the contents of the appendix are draining back into the cecum, or whether he is becoming critically ill because the appendix is completely gangrenous. I know of no way to determine which except by immediate operation. In a gangrenous appendix its lymphatic and blood circulation are destroyed and its nerves dead. Therefore there can be no pain and no absorption of products to make temperature and leucocytosis, at least until peritonitis supervenes.

2. *Ruptured Tubal Pregnancy:* To my mind the most important thought is the previous history of an absence or irregularity of the menses within the few months previous. The presence of some flowing after having missed a month or so leads some of the patients to feel that they have had a miscarriage.

In the fact of the above history, if the patient has a sudden pain in the abdomen, even though other symptoms are indefinite, you will have a very strong suspicion of an extra-uterine. My experience has been that pain in these cases has usually not the severity of some other abdominal crises. The patients oftentimes describe it as severe gas pains.

Temperature usually normal or subnormal early but later has tendency to rise because of blood absorption. The blood examination significant because leucocyte count commonly twelve to thirteen thousand with diminishing hemoglobin and red cell count. Although pulse is usually quick, yet we have all seen cases in which even in the presence of a large amount of blood

in peritoneal cavity, there is a relatively slow pulse.

Vertigo is of much value when present. Tenderness and rigidity play a relatively unimportant role in the average case. The tenderness may be somewhat general and the rigidity commonly nil.

3. *Acute Pancreatic Cases:* Have in my work been mighty far apart. However, in their diagnosis the three predominating elements are the intense overwhelming pain occurring in the epigastrium, the severe persistent vomiting and the usual tendency to collapse. The pain is generally understood as being the most severe of any of the abdominal crises. The temperature may be sub-normal at first. Rigidity is variable but tenderness usually present over all the gland involved.

4. *Perforation of Stomach or Duodenum:* In this type of case, I place of first importance the sudden atrocious pain in the upper abdomen. I appreciate the fact that usually there is a rather clear cut history of previous gastric or duodenal ulcer, but in many cases the symptoms have been very mild or indefinite and possibly such as to have given little concern to the patient. The pain in these patients is terrific, and such that you might hear the patient yelling for a block. Several times I have heard the physicians referring the case state that they had given hypodermic after hypodermic but without relief. Some years ago I heard Sir Barkley Monyhan, give a differential distinction between the appearance of a patient in a perforated ulcer and in a gall stone colic. In the former the patient holds himself as if in a vise, perfectly rigid, and on tension, and seems to be afraid to move or even breathe, but in gall stone colic they are restless and tossing about the bed. The severe pain in perforation cases can probably be explained by the fact that in addition to the insult to, and tension on, the peritoneum the acid contents of the stomach are very irritable to the peritoneum, particularly so since a large percentage occur after meals. I have observed that as soon as the perforation closed and leakage ceased that this excruciating type of pain ceases and is supplanted by the wound pain or peritonitis if it develops. Another interesting point is the usual tenderness and rigidity following down the region of the ascending colon. The omentum

acts as a water shed and the fluid primarily has a tendency to accumulate down the right side.

Nausea and vomiting are variable.

Temperature and leucocyte count normal at first until infection develops. Pulse normally fast.

5. *Ileus:* Only the mechanical obstruction type will be considered as the cause of the adynamic or dynamic types are not usually such as to come under our subject.

Pain is usually manifest largely around the umbilicus and is recurrent and colicky.

Nausea and vomiting occur early and are of the overflow type. The farther down the obstruction in the intestines the larger amount vomited. At first the contents of the stomach and then in order those of the duodenum, jejunum and ileum. The great bulk of the material is made up of the transudation into the intestinal tract above the obstruction. With the contraction of the intestinal wall the material cannot advance downward and must find its escape upward. In the beginning it is associated with nausea, later projectile and finally a mere gulp and overflow. Vomiting, if rather fecal, is a premonition of death. Formed feces does not occur above the cecum, and even if the obstruction is below this point the ileocecal valve would necessarily have to be incompetent to permit reverse of the current.

Temperature is never present in mechanical ileus at the beginning and not later until associated with infection. Rigidity is almost always present early but later may become indefinite. There is an additional finding in mechanical obstruction of great value, i. e. borborygmus. Without infection or a hypodermic this is always present, and is due to the great peristalsis shoving the gut contents against an obstruction.

PNEUMOCOCCIC PERITONITIS WITH REPORT OF CASE

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Pneumococcic peritonitis is divided into two groups: primary or idiopathic and secondary.

The primary form shows no other pathological lesion as the source of infection either during life or at autopsy.

The secondary form follows a pneumococcic

infection elsewhere in the body, as a pneumonia or empyema.

As the case I am reporting was primary we will consider that group only.

In 1885 the first case, in which the pneumococcus was recovered, was described by de Bazzola. In 1890 Sevestré reported the first successful operation on the primary form.

It is a rare disease occurring mostly, if not entirely, in female babies or children.

In 171 cases of peritonitis from Babies' Hospital, New York, over a period of 13 years Beaven reported 9 were pneumococcic, while only 2 were primary. These 2 were females 2 and 2½ years old.

The seven cases described by Struthers were all female children except one, which was a woman 33 years old. Children at any age may be affected, though from 5 to 7 is the most common.

Until recently there has been nothing definitely established as to the mode of entry into the peritoneal cavity.

Some authors advanced the theory of a blood stream infection. Others believed the pneumococcus was ingested and penetrated a weakened intestinal wall.

The third is the vaginal tract.

Struthers, in his article in the *Canadian Medical Association Journal*, sums up the reasons in favor of the vaginal tract as the portal of entry as follows:

It is essentially a disease of the female.

The symptoms are mainly pelvic.

At first the peritonitis is pelvic.

Cultures made from pus taken from different parts of the peritoneal cavity are more luxuriant from the pelvis.

Pneumococci may be recovered from smears of the cervix of the same type as those from the peritoneum.

Recent experimental work done by McCartney and Frazier of the University of Edinburgh tend to establish the vaginal tract as the source of infection.

By first alkalinizing the vaginal tract of a monkey, thus destroying the normal protective acidity and introducing the pneumococcus they have produced a pneumococcic peritonitis.

These investigators believe a vaginitis of some

type precedes all cases of primary pneumococcic peritonitis.

The pathological manifestations are diffuse, usually intense inflammation of the peritoneum, with the formation of greenish yellow pus and considerable fibrin. There is a tendency to localization and abscess formation, especially in the region of the umbilicus.

The onset is usually sudden and violent, though a more mild type is described with gradual development of symptoms.

To differentiate from appendicitis is often difficult or impossible, especially when the inflammatory process is more intense on the right side.

The mortality rate is very high, though somewhat more favorable in primary pneumococcic peritonitis than in other forms of general peritonitis.

Treatment. Operation is, no doubt, the indicated treatment if the case is diagnosed early.

Otherwise some cases will probably have a better chance to recover by waiting till abscess formation takes place, then opening and draining.

Cathartics are contraindicated.

Morphin is given to relieve pain and retard peristalsis.

Case 1. D. B., a girl 7 years old, became suddenly ill with acute abdominal pain while at a party. This was October 30, 5:30 p. m. She was taken home at once and I saw her at 8 o'clock.

There was a previous history of streptococcus sore throat a year ago with recovery. Three days ago child complained of burning and irritation about the vaginal orifice. The mother bathed with soda solution and applied zinc ointment.

At onset temperature was 102, expression anxious, knees drawn up, abdomen rigid and retracted. Extremely sensitive over lower abdomen and pelvis. Patient felt nauseated but had not vomited. At 9 o'clock patient was given low enema with evacuation of copious stool. At 9:30 undigested food eaten at party at 4 p. m. was vomited.

I saw her again at 10 p. m. and the temperature was 104, pulse 140, respiration 36. The appearance was that of a very sick child.

The chest was clear, no cough or other signs of a pneumonia.

I suspected an acute appendix but the pain and tenderness being still diffuse I decided to wait until morning for signs of localization.

However, the next morning there was still no sign

of localization of pain and the findings were the same as the previous evening with marked prostration. I then made a diagnosis of general peritonitis with probably an acute appendix.

I asked Dr. Rhoberg to see the case with me and he agreed with the diagnosis and advised immediate operation.

The child was brought to the hospital and operated on by Dr. Rhoberg at 2:30 p. m. This was 21 hours after the appearance of the first symptom.

Before operation the white count was 24,900. Urinalysis showed 2 to 4 pus cells per field, no sugar, or albumin; acid reaction.

At operation peritoneum over intestines in lower abdomen showed intense inflammation, with free pus in the pelvis. The appendix appeared only slightly injected, but was removed. Drainage tubes were inserted, one extending down into the pelvis.

Laboratory reported no pneumococci in the appendix or other essential pathology. Cultures of pus from peritoneal cavity contained a pneumococcus. Vaginal examination showed signs of redness with slight discharge.

The patient was put to bed in Fowler's position and 1/16 gr. doses hypo M. S. given at about 6-hour intervals the first few days. Drainage was moderate at first, but became rather abundant.

She ran a typical septic course till the 6th day, when a consolidation in the right apex developed; also a plastic pleurisy of the right lower portion. This was confirmed by Dr. Tice, who saw the case November 5.

The temperature resumed the normal on November 30 and the child made a complete recovery, leaving the hospital December 12.

CONCLUSIONS

This case is in agreement with McCartney and Frazier's belief that primary pneumococcic peritonitis is preceded by some type of vaginitis.

The mother used alkaline treatment, thereby, no doubt, decreasing the normal acidity of the vaginal tract, thus allowing the spread of the pneumococcic infection.

We believe early operation with good drainage was a vital factor in this child's recovery, as it certainly lessened the toxic absorption and allowed her to handle the pneumonia without being overwhelmed.

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A GREAT NATIONAL HEALTH PROBLEM*

JAS. M. McMANUS, M. D.

CAIRO, ILL.

A great problem of national importance which I have chosen for my address is venereal diseases. In my opinion this is the greatest health problem we are facing at the present day in this or any other country. It is also one that receives only a small proportion of the attention it demands, either from the profession or from the public. The latter may be expected to be indifferent. With all the educational propaganda that has been spread broadcast over the country since 1917, it is rather surprising that venereal diseases have shown no signs of decline. Very few people except the young are ignorant about the seriousness of these diseases, and very few there are who do not understand the vicious way in which they are spread.

Age-long sex taboo has resulted in a reserve through which it is quite impossible to penetrate in the same way that we do with other diseases. Perhaps there was an element of reason and judgment behind this attitude as one period of the world's history it seems at least to have played some part in the raising of woman from the position of a chattel to that of a human being. But in the present age of feminism, equal rights and equal standing, it should be modified because it has done more directly to foster and protect the propagation of the venereal diseases than any other element in our social makeup aside from prostitution itself. In many of the states there is a decided tendency on the part of the public to allow the knowledge of venereal diseases to be broadcast. In others, and notably in the southern States, it is not yet permissible. Occasionally the newspapers hint at the possibility that such diseases exist, but that is about as far as it ever gets. There is a crying need for a type of publicity for gonorrhea and syphilis in civil life that will bring them into the light of day. The "hidden menace" in society is venereal disease, and just so long as racial poisons are allowed to remain in darkness and, like the thief in the night, to dart out and steal that which is most to be desired by man—his health—and then dart back again where they cannot be seen and remain unmolested until ready to strike again,

*Presidential address before Southern Illinois Medical Society.

men and women will go down and the welfare of future generations will be jeopardized.

Last year 363,063 cases of venereal diseases were reported to the various state boards. The figures are those given out by the United States Public Health Service for 1924. But does any one really believe that this represents a true picture of conditions? Though the Public Health Service does not go so far as to assert that this figure, which is an increase over the previous year, actually means an increase in the prevalence, assuming that it may be due to better reporting by the physician, increased efficiency in diagnosis and a gradual improvement in public knowledge, I am inclined to believe that it really means an increase in the number of infections. It is stated that in the United States 770,000 young men reach the age of 21 years every year and it is conservatively estimated that of this number 60 per cent, or more than 450,000 will contract either gonorrhea or syphilis, or it may be both, before they reach the age of 30. The inoculation of 450,000 young men with the virus of syphilis or gonorrhea means that in all probability an equal number of young women will become infected. All of these young men contemplate marriage and in the nuptial embrace, unless their treatment has been thorough, they will almost surely infect their wives. The infection of the wife, particularly with syphilis, means infected offspring, with gonorrhea, blindness of the new born, and is directly responsible for about 75 per cent of abdominal operations for the removal of pelvic genitalia.

William Osler declared syphilis to be the greatest destroyer of the human race, that at least 8 to 12 per cent of all deaths are caused by it, most of such deaths being reported as heart lesions, apoplexy, paralysis, locomotor ataxia, insanity and arteriosclerosis. To summarize the investigations of a number of competent experts, it is claimed that fully 10 per cent of the total population of this country is affected with syphilis, either active or latent, that it is directly heritable, causing nearly one-half of all abortions, miscarriages and still-births. Eighty per cent of the children of syphilitic parents die in early life. Twenty-five per cent of the inmates of institutions for the insane and feeble-minded show active syphilis and many more are there because of syphilitic ancestry.

Syphilis is the one racial poison reducing the

race standard by the breeding of mental delinquents, moral degenerates and physically impaired. It is probably the greatest causative factor in inefficiency, insanity, pauperism and crime. Thousands of persons while supposing themselves cured, are harboring latent syphilis as a potent cause of degenerate progeny in the death of the victims themselves in middle life. In many cases death will be preceded by paralysis, insanity or some chronic illness in which syphilis might not be suspected. Insurance companies have found that the death rate among people supposedly cured of this disease to be double the rate of those who never had it.

Gonorrhea is the most common of all diseases except measles, and is responsible for 80 per cent of blindness of the new born and for 25 per cent of all blindness. In men it causes sterility, rheumatism, heart lesions, cystitis, stricture, prostaticitis and other complications.

Syphilis and gonorrhea cause more suffering and death than smallpox, diphtheria, infantile paralysis and tuberculosis combined.

We must perforce wage war against venereal diseases in the best manner we can. The venereal clinic and its activities are of primary importance and are the principal means of spreading knowledge to the masses. The clinics serve as places where the practicing physician can receive free instruction and work successfully in his community. In fact, the rural physician is one line of defense; he should be well grounded in the manner of handling venereal diseases.

The second measure for coping with the venereal diseases is the true suppression of prostitution and of potential prostitutes. This cannot be done by arresting, fining and lodging in jail. The jail is not the place for these women, though they be confirmed or just beginning to tread the downward path. A house of correction or farm, where they could be taken, treated, taught, and possibly rehabilitated, should be established. Arresting and otherwise tormenting prostitutes is generations old and it has never been successful and is never likely to be.

The third method by which we may hope to cause a real decrease in the number of venereal diseases is medical prophylaxis. Probably the advantage to be derived from it are at present more theoretical than real. But the recent conference of venereal officers at Hot Springs went on record as acknowledging the value of prophylaxis.

laxis and favored its introduction as an adjunct to clinical measures.

The fourth and last means that we have at our command and which eventually may react more powerfully than any other to eradicate the venereal diseases is the teaching of social hygiene to adults or to children. I am of the opinion that it is a waste of time and energy with grown persons for they are confirmed in their ways and no amount of talking propaganda or direct instruction will alter them. With children, however, it is different. They can be taught in easy stages and in such a manner that the instruction will bear excellent fruit in time. It will, of course, be necessary to teach the teachers first, and this is the more difficult task because of closed and biased minds, and because there will be found but few who are capable of presenting this difficult subject in the proper light. However, the time will come, if not already here, when parents with sufficient understanding will demand that their children be very carefully and gradually enlightened on sex matters.

A CASE OF COMA SIMULATING DIABETIC COMA*

H. V. GOULD, M. D.

Attending Physician, Ravenswood Hospital

CHICAGO

The patient was a woman with coma simulating diabetic coma but with no glycosuria and no unusual amount of sugar in the blood. She came into the Ravenswood Hospital on December 18, stating that she was tired and weak and wanted to go to bed. She was a stranger in the city. Her husband had died two months previously and her friends had entertained her very considerably and tried to occupy most of her time, so that she attributed her fatigue to that.

On entering the room the first thing noticed was a very strong odor of acetone and immediately diabetes was thought of. She was a fairly well built woman, muscular but not fat. Her skin was rather reddish and somewhat tanned, probably because of her life in the country. Examination of the urine showed no sugar, a slight trace of albumin and a very large proportion of acetone. She became unconscious shortly after and remained so for 36 hours. She

had all the appearances of an ordinary diabetic coma. Her breathing was of the Kussmaul type and her face was flushed. Blood pressure was 140. At the end of 36 hours she was given 40 units of insulin and it was covered with about 100 grams of sugar. Her response was rapid. Inside of an hour she showed very definite signs of returning consciousness. The insulin was repeated in smaller doses two and three times a day. All told she got about 150 units of insulin which was covered by 300 or 400 grams of carbohydrates. In addition to that she received a diet consisting essentially of 50 grams of carbohydrates, 60 grams of protein and 80 grams of fat. During the next five days she cleared up practically entirely, the coma disappeared, she was completely conscious and perfectly normal. During these five days physical examination by both Dr. H. W. Gray and myself were entirely negative. After three or four days she developed some pus in the urine, but this was practically cleared up before she left the hospital.

We were unable to discover why she had this acetone in the urine. It is known, however, that this type of acidosis is due to faulty fat combustion. Woodyatt says that unless fat burns in the fire of carbohydrate it smokes and acetone and other acid bodies in the system are merely evidence of fat smoking.

ON THE TREATMENT OF GENERAL PARALYSIS OF THE INSANE BY MALARIA

(Ellery, Reg. S.—*The Medical Journal of Australia*, 1: 401-404, April 10, 1926)

The author treated 6 cases of general paralysis in the insane using the following technic:

"From the median basilic vein of an untreated malarial patient at the height of a pyrexial period, 2 to 3 c.c. of blood were withdrawn into a syringe previously sterilized and washed out with a solution of sodium citrate. The blood was then immediately injected either subcutaneously or intramuscularly into the general paretic at a site just internal to the angle of the scapula. After an incubation period varying from 10 to 21 days the expected febrile attacks and rigors appeared and fresh patients were inoculated from the first recipient by a similar procedure.

"When necessary to curtail or terminate the treatment the patient was given five grains of quinine sulfate in tablet form 3 times a day for 3 days. The patients were allowed, so long as their general physical condition warranted, to have 10 to 12 rigors, at the end of which time the quinine was given. From the very first day of the quinine administration the rigors ceased and the temperature remained below normal and only

*Address before North Shore Branch, Chicago Medical Society, January, 1926.

in one instance did a relapse occur, which was easily stopped by a further administration of quinine."

Convalescence in these cases was as a rule of short duration and recovery in the successful cases was rapid. There was definite anemia after the usual series of rigors. The appetite was generally good and although the patients had lost weight and were considerably weakened, with a liberal diet of good food they quickly gained weight and lost all traces of anemia. "Mental improvement quickly followed physical improvement. Delusions disappeared and filthy habits became normal and the patients became amenable to reason and conscious to the social conventions. Exaltation subsided into a mild euphoria and the feeling of well-being was manifested in a desire to become useful. The 2 patients who derived most benefit from the treatment showed a willingness to work in the wards and a keen desire to be discharged and take up again their civilian responsibilities."

Although drawing conclusions from a limited number of cases the author feels that:

"The earlier the malarial treatment is commenced in the stage of the disease the greater is the success to be gained. Naturally with an organic disease like general paresis no form of febrile therapy can replace or patch up actual neuronc degeneration and little can be expected in any form of treatment from patients who have reached the advanced stages.

"The type of malarial symptoms does not appear to alter the ultimate results, although 2 patients had rigors almost daily and their pyrexial periods were fairly high.

"Despite the noticeable mental improvement, the neurological and physical signs in these patients were unaltered. Pupillary changes, reflexes and Wassermann reactions appear to remain the same after as before treatment.

"Better results seem to appear in the case of exalted and excited patients than in those who are depressed and demented.

"The treatment can be easily and quickly controlled by quinine administration."

It is possible that the high temperature attending malaria causes the death of the spirochete in the paralytic condition, since it is known that the plasmodia fail to grow in temperatures exceeding 104° F. It is also possible that there is a biological antagonism between the malarial protozoon and the spirochete.

One author found that by using this treatment 33 per cent of his cases were greatly improved, 20 per cent showed a good remission and capacity of employment, while 32 per cent belong to the slightly improved or unimproved. The remaining 15 per cent died.

HELL ON EARTH

It does sometimes seem like "going through hell" in being compelled to listen to some speakers, but it must often be done to show our appreciation, even though it be insincere.

Shortly after the World War ex-President Taft, who is now Chief Justice Taft, was invited to make

a speech in the Middle West. On the same platform was a patriotic fellow who had been wounded over in France. He was to be called on to speak after Mr. Taft had finished. The ex-President spoke at great length, and the audience had come out, of course, to hear him speak. Just as soon as he finished they started to leave the building. The ex-President leaned over to the chairman, said something, and that dignitary then shouted, "Come back here! Come back here every one of you, and take your seats! This fellow went through hell for us during the war, and it is up to us to do the same thing for him now."

Society Proceedings

ADAMS COUNTY

Regular Meeting, Oct. 11, 1926

This meeting was preceded by a dinner at 6:00 p. m., at the Elks' Club in honor of our guest, G. H. Copher, M. D., of the Washington University Medical School of St. Louis. There were twenty-four present. The meeting was called to order at 8:20 p. m., by the Vice-President, Dr. J. R. Pollock. Thirty-five members and eight guests were present.

Dr. G. H. Copher gave a very interesting address illustrated by lantern slides on "Cholecystography." The great value in this new method of diagnostic study of gall bladder disease was thoroughly explained. The paper was discussed by Drs. Shulian, Williams, Swanberg, Hartman, Koch, Cohen and closed by Dr. Copher. Dr. Ralph McReynolds gave a very interesting case report of Pseudomuscular hypertrophy and presented a patient suffering from this disease. Dr. E. B. Montgomery reported some of the interesting events, which occurred at the recent meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, which he attended last month.

At the business meeting the September minutes were approved as published in the October Bulletin. Dr. Center reported for the Public Health Committee, which was to investigate Cancer Educational work and made a motion that the matter of the so-called publicity in cancer be laid on the table. Seconded and carried.

Dr. Center also reported the investigation of candidates for the November election. Dr. Stevenson reported for the committee concerning a new meeting place for next year and recommended we continue to use the Elks' Club. It was moved, seconded and carried that the report be received. The Secretary read a letter from the St. Mary's Hospital Building Fund soliciting the endorsement of the society for an addition to their present quarters. Dr. McReynolds made a motion that the society endorse this Building Campaign. Seconded and unanimously carried. Dr. Center made a motion that the President appoint a committee to cooperate with the St. Mary's Building Fund Committee in raising the necessary funds. Seconded and carried. The Secretary announced that the next meeting of the society would be the one which Dr. W. J. Mayo and

some of his associates had accepted an invitation to attend. The date of this meeting has not been set. The Secretary stated that the Bulletin had proved itself a losing proposition this year and that at present there was a deficit which he was personally taking care of. Under the present arrangements the Secretary is responsible for any financial deficit incurred by the Bulletin and in addition, has the burden of securing the necessary advertising, etc., to pay its expenses. In view of the above he made a motion that the President and Secretary be permitted to enter into a contract for the society for publishing the Quincy Medical Bulletin during 1927, the expense not to exceed \$100, and which would insure the society of no financial responsibility beyond this amount and permit the society to censor the advertising. This was promptly seconded and carried without a dissenting vote. The censors reported favorably upon the application of Dr. Milton Bitter for membership. Ballots were cast, tellers appointed and as a result Dr. Bitter was elected to membership. A motion was made to extend Dr. Copher a rising vote of thanks for coming to Quincy to address the society. This was promptly seconded and unanimously carried. The meeting adjourned about 11:00 p. m.

HAROLD SWANBERG, M. D.,
Secretary.

ADAMS COUNTY

Special Meeting, Oct. 21, 1926

October 21, 1926.

This was a special meeting called by the President and was held at the Elks' Club at 11:30 a. m. Eighteen members were present.

The President requested that Dr. Stevenson, Chairman of the committee appointed to cooperate with the St. Mary's Building Campaign Committee (other members Drs. McReynolds and Shulian) to report what he desired to state. Dr. Stevenson reported a conference that the committee had had with the campaign manager of the St. Mary's Building Campaign Committee which was to the extent that each member of the Adams County Medical Society be a captain of a team to secure funds and he in turn to appoint a number of chairmen, etc. The proposition was discussed by a large number of those present. Dr. Center made a motion that the report of the committee be received and placed on file. Seconded and carried. Dr. Center then made a motion that the campaign manager be notified that it was inadvisable for us to cooperate as a society along the lines suggested but that the members of the Adams County Medical Society were desirous of cooperating in the St. Mary's project with their time, assistance and personal subscriptions. This was duly seconded and carried without a dissenting vote. Dr. Center moved that the Hospital Committee be discharged. Seconded and carried. Dr. Stevenson made a motion that the proceedings of this meeting be conveyed to the St. Mary's Building Committee by the Secretary. Seconded and carried.

Adjournment was made at 12:10 p. m.

HAROLD SWANBERG, M. D.,
Secretary.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Annual Dinner, Oct. 13, 1926

Principal address was given by Dr. Max Mason, president University of Chicago. Dr. Ray R. Ferguson was installed as president. Dr. Malcolm L. Harris, retiring president, was presented with a new International Encyclopedia by Dr. Hugh F. Patrick on behalf of the society.

Regular Meeting Oct. 20, 1926

Physiologic Considerations in Abdominal Surgery..

.....Jabez N. Jackson, Kansas City, Missouri
Discussion, M. L. Harris, Wm. R. Cubbins.

Indications for Partial Gastrectomy.....G. deTakats

Discussion.....H. M. Richter

During the meeting Chicago Medical Society was visited by Floyd Bennett, who, with Commander Byrd, made the first aeroplane flight around the North Pole.

Joint Meeting Chicago Medical and Chicago Tuberculosis Societies, Oct. 27, 1926.

The Facts Upon Which Specific Treatment of Tuberculosis is Based. Ernest Loewenstein, Professor of Experimental Pathology, University of Vienna, Austria.

HENRY COUNTY

The Tri-County (Henry, Knox, Warren) Medical Meeting was held in Kewanee, Thursday, October 7, 1926.

A Blind Bogie Golf Match was held at the Midland Country Club in the morning. First prize was won by Dr. C. B. Horrell, Galesburg. Second prize by Dr. E. G. Franning, Galesburg.

At noon a chicken dinner was served in the Kewanee Club Rooms by the ladies of the First M. E. Church. About 70 doctors were present for dinner including the President of the Illinois State Medical Society, Mather Pfeifferberger of Alton, President-Elect Henry D. Mundt, Chicago, and H. M. Camp, Secretary of the Illinois State Medical Society.

Immediately following the dinner a short program was presented:

Toastmaster, Dr. John H. Oliver, President Henry County Medical Society.

Address of Welcome, by Dr. Paul B. Howard, Kewanee.

Instrumental Solo by Miss Dorothy McGrath, Kewanee.

Short talk by President Mather Pfeifferberger, Alton.

Vocal Solo by Miss Eunice Anderson, Kewanee.

Impromptu talks were also made by President-Elect Mundt of Chicago and State Secretary H. M. Camp of Monmouth.

After an intermission of fifteen minutes the Scientific Program was presented.

The first paper of the afternoon, "Some Phases of

Infant Feeding," was by Dr. Clifford G. Grulee, Chicago, Professor of Pediatrics, Rush Medical College.

Dr. Grulee's paper was very instructive and helpful to the men in general practice.

The next paper was on "Fractures of the Hip and Femur from the Standpoint of Anatomy and Mechanics," by Dr. Paul B. Magnuson, Chicago. His talk was supplemented by stereopticon views that brought his lecture out forcibly to his audience.

The last paper of the afternoon, "Some Facts in regard to Heart Conditions with Special Reference to Hypertension and Angina Pectoris," by Dr. Charles Spencer Williamson, Professor of Medicine, University of Illinois College of Medicine.

This last paper was a masterpiece on Heart Conditions and the essayist certainly gave a very useful and instructive paper.

The afternoon program was attended by some two hundred doctors from the following towns: Chicago, Alton, Galesburg, Monmouth, Avon, Bushnell, Alexis, Macomb, Aledo, Roseville, Ohio, Princeton, Buda, Napoleonset, Toulon, Wyoming, Bradford, Annawan, Geneseo, Orion, Cambridge, Galva and Kewanee.

It was the opinion of those present that this meeting was one of the best ever held by the Tri-County Medical Society, both from the standpoint of attendance and Scientific Program.

About 25 of the visiting doctor's wives attended a one o'clock luncheon given by the Woman's Club of Kewanee at the Baptist Church after which they were entertained by a program by the members of the Women's Club and local doctors' wives.

P. J. McDERMOTT,
Secretary.

LA SALLE COUNTY

La Salle County Medical Society met in Kaskaskia Hotel at La Salle, October 26, 1926, with a large attendance of La Salle County physicians and good representation from Livingston, Lee, and Woodford Counties.

In the morning session, Dr. Harold M. Camp, secretary of the Illinois State Medical Society, gave an address on "Organization Helps." Dr. G. Henry Mundt, president-elect of the State Society, discussed the subject: "Minimum Responsibility in Public Health." Dr. Philip H. Kneuscher, of Chicago, presented "Facilities for Scientific Service." Miss B. C. Keller, manager of Lay Education, discussed "Facilities for Lay Education."

After dinner as guests of the Tri-City Medical Society, election of officers resulted as follows: President, Dr. Ella Fitch of Ottawa; secretary-treasurer, Dr. E. E. Perisho of La Salle; delegate, Dr. J. S. Green of Utica.

The program was resumed with a paper by Dr. M. M. Sellett of La Salle on "Chronic Focal Infection of the Eye, Ear, Nose and Throat." Dr. Kreuscher then illustrated the subject of "Backache" with lantern slides. Dr. Camp discussed "Pelvic Infection," and Dr. Mundt brought this most interesting and

instructive program to a close with an address on "Relation of Eye, Ear, Nose and Throat to General Practice."

MARION COUNTY

The Marion County Medical Society held their October meeting at the home of Dr. and Mrs. W. L. Finn, Iuka, Ill.

The business meeting was called to order by President Dr. H. D. Gillett. Quite a bit of enthusiastic condemnation was displayed with reference to proposed amendments to the Harrison Narcotic law, and the extension of time limit on the Sheppard-Towner bill. In the discussion it developed that we should take the matter of the Sheppard-Towner law to the Women's Clubs and show them the fallacy of this law.

After the business meeting we were served with delicious luncheon, chicken salad, hot rolls, and coffee, followed by sweet cider and ginger bread. The next hour or two was given over to music, conversation and cigars. It was very evident every one enjoyed himself to the utmost. As we were leaving Mrs. Finn presented each with a bunch of gorgeous dahlias grown in her flower garden.

W. N. HAMILTON, Sec'y.

OGLE COUNTY

The Ogle County Medical Society met in regular session in the Elks' Hall in Rochelle, October 20, 1926, at 1:30 p. m.

President Akins called the meeting to order. Roll call found twelve members present. Minutes of the previous meeting were read by the secretary and approved.

Dr. Robert W. Keeton of Chicago gave a very practical lecture on "Colitis and Some Common Related Conditions."

Dr. Keeton's lecture brought out many good, salient points and it ranked well among the most instructive ever given before the society.

Election of officers resulted as follows:

President, J. M. Beveridge, Oregon; vice-president, W. E. Kittler, Rochelle; secretary-treasurer, J. T. Kretsinger, Leaf River; delegate, W. E. Kittler, Rochelle; alternate, J. C. Akins, Forreston; censor for three years, Thos. McEachern, Rochelle; legislative committee appointed by the president, H. H. Sheets, Oregon; J. M. Beveridge, Oregon, and Chas. Price, Mt. Morris.

Motion made by Dr. Kittler, that a rising vote of thanks be given Dr. Keeton for his able lecture and assistance. Carried unanimously.

Adjourned to meet at its next regular session in April, 1927.

After adjournment, Dr. J. Petritz of the Lincoln Hospital, Rochelle, invited the doctors to visit the hospital where he served a delicious five o'clock dinner. A vote of thanks was given Dr. Petritz for his generous hospitality. After two hours of social greeting the guests retired to their respective homes.

DR. J. G. KRETSINGER,
Secretary.

Marriages

JAMES L. ALLEN to Miss Ruth Fox, both of Robinson, Ill., recently at St. Louis.

ROBERT NEIL CROW to Miss Helen Joanna Byrne, both of Chicago, July 28.

GEORGE H. GARRISON, White Hall, Ill., to Miss Anna Pessel of Belleville, July 1.

JACOB A. GOODHART to Miss Sophia S. Gelder, both of Chicago, May 30.

JOHN D. KOUCKY, Chicago, to Miss Margaret Welch of Bismarck, N. D., October 12.

RAYMOND J. MURPHY, Chicago, to Miss Helene McAuley of North Adams, Mass., September 8.

Personals

Dr. Leroy McLaughlin has been appointed director of the Illinois Masonic Hospital, Chicago.

Dr. William R. Mangum, Bridgeport, has been appointed county physician.

Dr. Emery B. Neff has accepted the position of chief surgeon for the John Deere Company at Moline.

Dr. Harold Swanberg, Quincy, addressed the Fulton County Medical Society at Canton, Ill., October 5, on "Radium Therapy."

Dr. Julius Grinker, Chicago, addressed the Sangamon County Medical Society, Springfield, October 7, on "Selected Chapters in Neurology."

Dr. Friedrich von Muller, professor of medicine, University of Munich, gave an address at the University of Illinois College of Medicine, October 13, on "Metabolic Disorders."

Dr. Herman L. Kretschmer, Chicago, addressed the Scott and Rock Island County Medical Society, Rock Island, October 5, on "Relation of Urology to General Medicine."

Dr. Rollin H. Stevens, Detroit, will address the Chicago Roentgen Society, October 14, on "Estimate of the Value of Radiation Therapy in Dermatology."

A dinner in honor of Dr. Jabez N. Jackson, Kansas City, Mo., President-Elect of the American Medical Association, was given at the Hamilton Club, October 20, by members of the Chicago Medical Society.

Dr. George de Tarnowsky has resigned from the faculty of Loyola Medical School and accepted an appointment as associate professor of

surgery at the University of Illinois School of Medicine.

Dr. Friedrich von Müller, professor of medicine, University of Munich, gave an address at the University of Chicago, October 11, on "Physical Methods of Clinical Diagnosis," and at Rush Medical College, October 12, on "Post-encephalitic Parkinsonism."

Dr. Andrew L. Skoog, Kansas City, will address the Chicago Neurological Society, October 28, at the Drake Hotel, 8:15, on "Herpes Zoster in the Trigeminal Area" and Dr. John B. Doyle, Rochester, Minn., on "Obstruction of the Longitudinal Sinus."

Dr. Ernest Lowenstein of the University of Vienna, will address a joint meeting of the Chicago Medical Society and the Chicago Tuberculosis Society, Marshall Field Annex, sixth floor, October 27, on "Facts on Which Specific Treatment of Tuberculosis Is Based."

The Chicago Surgical Society held a special meeting, October 11, at the University Club; the speakers were Dr. S. Sampson Handley, London, England, and Dr. Roberto Alessandri, Rome, Italy.

Mr. Anthony Czarnecki, collector of port, U. S. Customs, addressed the Physicians' Fellowship Club, October 15, at the Logan Masonic Temple, 2451 Kedzie Boulevard, on "Resuming Activities."

At the forty-eighth annual meeting of the Chicago Gynecological Society at the Palmer House, October 22, Dr. William A. Newman Dorland was elected president; Drs. William McIlvain Thompson and William George Lee, vice presidents; Dr. Joseph L. Baer, secretary, and Dr. Charles B. Reed, treasurer.

Drs. Milton Pfeifferberger, Alton, and Gustaff Henry Mundt, Chicago, president and president-elect, respectively, of the Illinois State Medical Society, addressed the Madison County Medical Society, Edwardsville, October 1, on "Surgery of the Gallbladder," and "Nose and Throat Infections from the Standpoint of the General Practitioner."

The Chicago Urological Society was addressed October 28 at the John B. Murphy Memorial Building, 40 East Erie Street, by Dr. Damon A. Brown, Madison, Wis., on "Renal and Ureteral Calculi in Childhood"; this was a candidate's thesis; Dr. Harry B. Culver addressed the society on "Urethral Calculus," and Dr. Herman L.

Kretschmer on "Persistence of Symptoms Following Vasostomy."

Dr. Arthur H. Curtis has been appointed professor of Gynecology in Northwestern University Medical School vice the late Dr. Thomas Watkins.

A dinner in honor of Dr. Wm. T. Belfield was given, October 23, at the Congress Hotel, by members of the Chicago Medical Society.

Dr. P. J. H. Farrell was re-elected Surgeon General of the Military Order of the World War at the national convention held at Philadelphia, October 9, 1926.

Dr. Ralph H. Kuhns, Professor of Pediatrics at the Illinois Post-Graduate Medical School, Chicago, spoke at a meeting of the Evanston branch of the Chicago Medical Society, October 14, on the subject of "Intra-Cranial Injuries in the New-Born"; and at a meeting of the Irving Park Woman's Club, Chicago, October 18, on the subject of "The Child and the Community."

Dr. Robinson Bosworth, superintendent of the tuberculosis sanitarium in Rockford, was recently elected president of the American Sanatorium Association in Washington, D. C.

Dr. Robert A. Hair of Los Angeles has joined the staff of the Hinsdale Sanitarium.

Dr. Frank Worden has recently retired from a practice covering fifty years in Alton. Dr. Thomas Morgan of Humboldt, Illinois, will be his successor.

Dr. Emery B. Neff of De Kalb has been appointed medical director to the John Deere Works, with headquarters in Moline.

News Notes

—The Chicago Gynecological Society held its forty-eight annual meeting and dinner at the New Palmer House, October 22, and elected the following officers for the ensuing year: President, Dr. W. A. Newman Dorland; first vice-president, Dr. W. McIlvaine Thompson; second vice-president, Dr. W. George Lee; secretary, Dr. Joseph S. Baer; treasurer, Dr. C. B. Reed; pathologist, Dr. Irving F. Stein; editor, Dr. Carey Culbertson.

—At a regular meeting of the Elgin Physicians Club, Oct. 13, Dr. Milton Jacobs was elected secretary to fill the vacancy caused by the

death of Dr. Floyd A. Pingree. Dr. Irving Stein of the Northwestern Medical School and Michael Reese Hospital, talked before a large attendance of the club on Cesarean Section. He covered the diagnostic value of x-ray in pelvic conditions; the handling of breech presentations, and a detailed description of the low cervical Cesarean Section. Slides loaned by Dr. De Lee were used throughout the talk, which was given in great detail, and in well-chosen language. The meeting was considered one of the most successful in the history of the club.

Milton Jacobs, M. D., Sec'y.,
Elgin Physicians' Club.

—The Jackson Park Hospital, 7531 Stony Island Avenue, will build a nine story addition which will make the total capacity 225 beds.

—The American College of Physical Therapy will meet at the Drake Hotel, October 18-23, in conjunction with the Clinical Congress of Physical Therapy.

—The new \$750,000 hospital for crippled children, Oak Park and Belden avenues, which was provided by the local lodges of Shriners, was formally presented to the city, September 12; the new hospital is the ninth in a chain of similar institutions built and supported by the Shriners throughout the country.

—The Chicago Ophthalmological Society will meet, October 18, Hotel Sherman; a dinner will be given in honor of Dr. Nelson M. Black, Milwaukee, preceding the program. Dr. Black and Dr. Ferdinand H. Haessler will address the society on "Dystrophic Intracellular Opacity of the Corneal Epithelium."

—The dean of Northwestern University Law School, Mr. John H. Wigmore, announces a gift of \$150,000 from Mrs. Anna L. Raymond, Chicago, for the development of the legal clinic. The gift will make it possible, it is said, to enlarge the service of the clinic, through which poor persons are defended without charge.

—The director of the state department of public welfare issued a bulletin, October 1, it is reported, directing that all patients and employees in state institutions be vaccinated against typhoid at once. The order will affect about 32,000 patients and 5,000 employees, and is said to have been brought about by the danger of possible contamination of water and milk supplies by the recent floods.

—The mortality rate from cancer in Illinois in 1925 was 104 per hundred thousand of population, a new high record rising from a rate of 101 in 1924. Figures just made public by the state department of health account for 7,283 deaths from cancer in 1925 against 7,001 in 1924. The earliest cancer statistics available in the state are those for 1902, when the mortality rate was 51 per hundred thousand. Cancer has become second only to heart disease among the ten most important causes of death in the state. The state health director has been unable as yet to give any satisfactory reason for the variation in cancer mortality in different parts of the state; in the thirty-three most northern counties, the rate last year was 114 per hundred thousand; in the thirty-four central counties the rate was 100 and in the thirty-five southern counties it was only 80.

—President Max Mason of the University of Chicago announced, October 21, a gift of \$3,385,000 from the General Education Board of New York for the support of a medical project at the university which will provide hospital and clinic as well as facilities for research on a large scale in close proximity to the established scientific departments of the university. The gift is conditional on the raising by the university of an additional \$2,000,000 for endowment of its medical program. There will be opened soon new medical buildings covering two square blocks on the Midway between Ellis Avenue and Cottage Grove Avenue, where there will be established clinical departments which are to function in the graduate school of medicine, thus making the medical sciences a definite and integral part of the university and linking them with the present medical sciences, which have been highly developed in the university laboratories. The buildings nearing completion will provide research laboratories for investigation of medical and surgical problems and include new laboratories for physiology, physiologic chemistry, pharmacology, medicine, surgery, pathology, the Max Epstein Clinic and the Albert Merritt Billings Hospital. An integral part of the program will be the work of the Douglas Smith Foundation for Medical Research. These new units will be the nucleus of a much larger program which it is hoped to realize within the next ten years; this calls for a children's clinic, a lying-in hospi-

tal and gynecologic clinic, a psychiatric clinic and infectious disease hospital, funds for which have been provided by the will of Mrs. Charles Gilman Smith, an orthopedic clinic and other projects of lesser magnitude. The university will arrange its program so that the clinical work at Rush Medical College and that on the Midway will supplement each other.

—The American Society of Clinical Surgery held a session in Chicago, October 23-24 and attended clinics at the Presbyterian, University of Illinois, Cook County, St. Luke's and Wesley Memorial hospitals. Prominent members of the society present included Drs. Wm. Haggard of Nashville, Charles Mayo of Rochester, Minn., Drs. Wm. Darrach, Eugene Poole and Wm. Downs of New York City, Fred Murphy of Detroit and Fred Lund of Boston.

Deaths

JOHN A. BLANCHARD, Cobden, Ill.; Eclectic Medical Institute, Cincinnati, 1875; aged 72; died, September 3, of angina pectoris.

ADOLPHE R. CARON, Lombard, Ill.; Chicago Medical School, 1916; aged 44; died, September 22, following a long illness.

ALFRED DAHLBERG, Chicago; Rush Medical College, Chicago, 1881; formerly a druggist; age 79; died, October 6, of arteriosclerosis.

JOHN MARTIN DILLON, Sterling, Ill.; Hahnemann Medical College and Hospital, Chicago, 1903; aged 47; died, in September, at Seattle, of local suppurative neuritis.

HENRY W. DORNBUSCH, Chicago; Rush Medical College, Chicago, 1883; a Fellow, A. M. A.; aged 66; died, September 3, of cerebral hemorrhage.

OLIVER PERRY GRANT, Easton, Ill.; Northwestern University Medical School, Chicago, 1905; aged 48; died, September 17, of cerebral hemorrhage.

THOMAS W. JONES, Normal, Ill.; Medical School of Maine, Portland, 1870; aged 82; died, September 21.

ARTHUR M. KOHL, Belleville, Ill.; Medical College of Indiana, Indianapolis, 1896; member of the Illinois State Medical Society; aged 54; died, September 14, at the Barnes Hospital, St. Louis, of carcinoma of the neck.

ROBERT AVERY NOBLE, Bloomington, Ill.; Northwestern University Medical School, Chicago, 1901; member of the Illinois State Medical Society; served during the World War; on the staff of the Brokaw Hospital; aged 49; died, September 27, of cerebral hemorrhage.

ARTHUR WEIR SMITH, Chicago; Eclectic Medical Institute, Cincinnati, 1872; aged 85; died, August 23, as the result of a fall.

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OF MEDICINE

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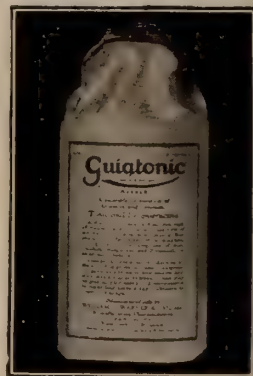
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ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF
THE ILLINOIS STATE MEDICAL SOCIETY

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Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

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Editorial

THE PRACTICE OF MEDICINE BY CONGRESS

SOON CONGRESS WILL TELL THE DOCTORS HOW TO PRESCRIBE CATHARTICS

One of the most devastating decisions of the Supreme Court of the United States is that handed down recently, permitting Congress literally to take the practice of medicine out of the hands of the country's medical profession.

This blow at public welfare and medical efficiency is struck through the Supreme Court's interpretation of the Volstead act. In the decision under consideration it is held that a physician may not prescribe more than a pint of whiskey for a patient during a period of ten days. The condition of the patient, the reasons for the prescribing of the whiskey, the possibility for saving life and the scientific judgment of the physician count for nothing at all in the face of the letter of the law. Truly an instance of the exactitudes of the proverbial "Pound of flesh." If in the doctor's judgment more than a pint of whiskey should be required to save the life, or to alleviate the suffering of his patient during the ten day period, then the physician faces no alternative. He must become a law-breaker whether he will or not. If the patient dies because more than a pint of whiskey, administered during the set time, might have saved him,—then the doctor is beyond all reason a murderer. If on the other hand, the physician does prescribe a necessary amount of the forbidden medicament, he is a law-breaker and apt to lose his license to practice medicine, to pay a fine or perhaps to be imprisoned.

It is understood that the Supreme Court itself was divided as to the propriety and justice of this decision. Also, that the findings were based upon the contention that physicians differed upon the advisability or necessity for administering whiskey in any case.

There are few drugs in the pharmacopeia about

which there is not a varying opinion held by doctors. What applies to whiskey, applies as well to opium, castor oil, salts or other purgatives, digestants, mercury, and quinine. Yet Congress would be laughed out of countenance over the attempt of the Supreme Court to sit in judgement over the right of a doctor to prescribe for a patient a certain number of cathartic pills.

The Supreme Court justified its decision by claiming that, as doctors divide in their opinion as to the use of whiskey, Congress, acting through the Volstead law and the prohibition director, had the right to serve as arbiter, and to tell the medical profession what it should do.

Now, in present day practice doctors disagree even more about the use of cathartics than they do about the use of whiskey. Under this assumed jurisdiction of the Supreme Court given to Congress, the nation's lawmakers have as much right to inform a doctor that he shall not give more than three cathartic pills in a month, or more than one bottle of citrate of magnesia in a year.

There is a great diversity of opinion among doctors, upon the value of surgical operations. Tenets of one school of medicine are built upon the theory that the knife is never justified. Even a layman can see without a diagram the folly of Congress trying to regulate the desirability or the time for a Cesarean section or an appendectomy, yet there is no fundamental difference between legislative interference with surgery or with medico-therapy.

On the surface of affairs, the Supreme Court would seem to be hoist by its own petard. This august body excuses itself for interference with the modus operandi of another science and profession on the ground that members and practitioners of that science and profession are a house divided against itself. The Supreme Court would seem to be guilty of the same sin. There was controversy in that body as to the handing down of this decision. As only too often happens, and as the legal profession only too often pleads, here is another instance where the bulk of logic, reasoning and sound judgment lies with the minority report.

Congress is telling physicians how to practice medicine. Now the practice of medicine is something about which no layman, whether a congressman or not, knows anything. In view

of the vast number of crucial economic problems now confronting the nation Congress should attend first to those duties for which it was sent to Washington. This would be in far better taste as well as far better for the nation than the present crude attempt to make of a great science the prostituted handmaid of intellects unversed in medicine.

LAY PRESS CONDEMNS SUPREME COURT DECISION AS TO PHYSICIANS PRESCRIBING UNDER THE VOLSTEAD LAW

One of the most intelligent comments upon the recent Supreme Court decision dealing with the medical features of the Volstead Act is here reprinted from the editorial page of the *Chicago Tribune* for December 2.

MEDICINE AND PROHIBITION

Will the Supreme Court's decision on medicinal alcohol prove to be the Dred Scott case of prohibition?

It might well be. Certainly no conscientious physician in charge of a serious case will waive his judgment of the need of his patient because of the dictate of a legislature or the opinion of a bench of judges. The prescribing for the needs of the sick is not a proper function either of a legislature or a court, and the law which attempts to put limits on the judgment of the physician is of a piece with the fanaticism which would determine any other scientific judgment by act of law. If a legislature directs that no public school shall teach that the earth is a sphere, if it directs that it shall teach that the earth is the center of the universe and that the sun moves above it from east to west, it would be no more out of its legitimate field than it is when it forbids a physician to prescribe more than an amount of alcohol which it fixes in its own wisdom.

The 18th amendment was in plain language directed at and limited to prohibiting the use of alcoholic intoxicants as beverages. The decision of a bare majority of the Supreme Court now extends the prohibition to their use for medical purposes.

That is the rock bottom fact of this decision. The reasoning of the majority cannot evade or obscure it. Under this decision a physician charged with care of a patient and honestly convinced that the patient requires an amount of

alcohol beyond the limit fixed by a prohibitory statute must disobey his conscience and his scientific judgment or disobey the law. The theory of the decision seems to be that in order to prevent an abuse of medical authority the free judgment of responsible medical men may be properly circumscribed under a constitutional provision prohibiting alcoholic beverages. By such interpretation a constitutional provision can be expanded indefinitely under the device of administrative measures and the politician, the professional reformer, and the judge elbow the physician from the bedside of his patient.

We think this is an intolerable distortion of the functions of law and government, of legislator and judge. We think it is an intolerable distortion of the plain intent of the 18th amendment. We think it is bringing teetotalist fanaticism to the point of murderous tyranny.

The Volstead act, with its ramifications, is like the squid. It must be destroyed. Juries, at any rate, save when dominated by ignorance and bigotry, will not punish defiance of laws which penalize reason and run beyond the proper domain of government. If the courts support the excesses of teetotalist tyranny, they invite the hatred which the alien and sedition laws brought upon them and prepare consequences no less serious and demoralizing than the weakening of the respect for law and judicial authority which followed those devices of blind partisanship and which is responsible to a great extent for the inefficiency of American criminal procedure to our day.

PAPERS FOR THE 1927 ANNUAL MEETING

The officers of the five sections of the Illinois State Medical Society are anxious to arrange their respective programs as early as possible. The programs next year will be conducted somewhat differently from those of former years, and should make the meeting more attractive than ever before.

All members of the Society who are interested in presenting papers before any of the sections at Moline May 31st, June 1st, 2nd, 1927, are requested to write to either the chairman or the secretary of the section in which he is interested, giving the title of the paper and the full address of the author.

It is customary to divide the papers in each

section equally between members of the Chicago Medical Society, and the Downstate Societies.

The Committee on Arrangements at Moline has just reported that all sections will meet in the same building, the same that will house the exhibits, registration and information headquarters.

This arrangement will add materially to the interest of the meeting and all efforts are being made to have an unusually large attendance for the 77th annual meeting.

SECTION OFFICERS

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E. S. Blaine, chairman, 5 South Wabash Ave., Chicago.

Harold Swanberg, secretary, Quincy.

It is requested that the Chicago Medical Society members write to the Chicago officers, and the Downstate men get in touch with the other members so that there will be no confusion, and the programs can be arranged in such a manner that the 1927 annual meeting will be one long remembered.

JUSTICE THOMPSON, MEMBER OF THE
ILLINOIS SUPREME COURT, REBUKES
BUREAUCRACY. BUREAUCRACY
WHEREVER TRIED IS A CURSE;
WHEN APPLIED TO MEDICINE
IT IS FATAL

DANGERS OF BUREAUCRACY IN GOVERNMENT

Justice Floyd E. Thompson of Rockford, a member of the Illinois Supreme Court at the closing banquet of the Illinois Lions recently issued a challenge to American Citizens to take

stock of themselves and to prevent the growing tendency towards a bureaucratic government.

State and national legislatures and general assemblies will soon be in session.

There is every indication that more than the usual amount of nefarious, malicious legislation will be presented before the lawmakers.

Now is the time to interview representatives and congressmen and to discover how and why and where they stand upon the socialistic doctrines promulgated by a group of theorists and calculated to mislead and to deceive a public already stuffed to the bursting point with freak legislation.

A good thing cannot be repeated too often. It is perhaps not amiss to cite from a recent speech of Justice Floyd E. Thompson. It will be remembered that Justice Thompson is the sterling patriot who delivered to chiropractors and drugless healers, the most scathing rebuke in the last decision upholding the medical practice act.

Inveighing against the approach of a bureaucracy, Justice Thompson, who took for his subject "The State in the American System of Government, said in part:

"Men of both great political parties are warning that there is now under way a persistent and determined movement to change our form of government from a representative republic to a bureaucratic one. The problem transcends all differences between the historic parties. To accomplish such a change, there must be a revolution in our political beliefs. We must cast aside our experiences of a century and a half, as well as the lessons of five centuries before this republic was born.

"This challenge to the American system of government makes it imperative that we take stock of our foundation stones. To better fit ourselves to grapple with the big problem of government we ought to recur frequently to the fundamental principles upon which this government rests.

"Our constitution recognizes that the American state, as a political entity, is a natural growth developed along natural lines as the needs of the people grow. All students recognize that the federal government is the people's creature. The term 'state' has two well defined meanings—it may be the corporate entity organized for the purpose of performing the proprietary functions of government, or it may be the citizens

living within the defined limits, acting together for the purpose of exercising their natural governmental functions. The state, as a corporate entity, has no sovereignty: the state, as a political entity, has all the sovereign rights and powers of the citizens composing it.

"Probably the greatest single menace to the continuance of our form of government is the tendency to abolish the autonomy of the state and establish in its stead an unrestrained centralized national government.

"Wise and patriotic men of all political parties are viewing with alarm this tendency and are virtually conscious of the fact that its accomplishment means the destruction of the liberty of the citizen and the life of the Republic.

"The sovereign that stands behind the law of this country is the people of the several states. To them, acting as separate political units, the national government owes its creation and its continuance. The federal constitution enumerates the powers delegated to the federal government and declares all powers not so delegated reserved to the people of the several states. If this republic is to live, we must guard carefully this right of local self-government.

"In the growing tendency on the part of the states to seek federal aid, five principal subjects now come under a 'fifty-fifty' system whereby the federal government makes an appropriation, matched by the state, for the promotion of various agencies, the direction of which is vested in bureaus at Washington. These subjects are highway construction, agricultural extension work, vocational rehabilitation, and maternity and infancy hygiene.

"Every one of these causes is worthy but every one of them is purely local, and yet are taken over by the federal government in direct violation of the spirit of the constitution.

"Ten years ago these federal subsidies to the state amounted to less than \$6,500,000 a year; in 1925 they aggregated more than \$110,000,000. Vicious as the system is for the extravagance it breeds, its worst feature is the invasion of the federal government into matters purely local. Under the 'fifty-fifty' system, each state must match the federal appropriation allotted with an equal amount from the state treasury, and must agree to submit to supervision of the expenditure. This supervision comes from the federal government."

CHICAGO DAILY NEWS OPPOSES SHEPPARD-TOWNER LAW; ALSO A FEDERAL DEPARTMENT OF EDUCATION

Recently the *Chicago Daily News* under the caption "Invading State Rights" said:

"The effort being made in Washington to establish a federal department of education is only another manifestation of the objectionable tendency to extend the obnoxious system of bureaucracy.

"Members of congress should strenuously oppose this movement. As the *Chicago Daily News* suggests, the senate committee on education and labor and the senate as a whole will be subjected soon to a severe test of sincerity and courage in connection with the vital problem in question. A bill is pending in the senate committee that would extend for two years the Sheppard-Towner maternity and infancy law. Numerous women's organizations have approved it. The house has passed it by a decisive majority, despite powerful arguments in opposition.

"This bill should be adversely reported by the committee and defeated on the floor of the senate. Five states—including Illinois—have refused to accept money authorized by the act, and there is no evidence that other states have derived substantial benefits from it. Even if, as some claim, the act has stimulated state interest in proper protection of maternity and infancy, there is no good reason for further federal appropriations. The educational work has been done and no American state is too poor to provide for its own needs.

"The News correctly sums up the situation when it says that "senators who condemn the extension or perpetuation of federal aid where no necessity for it exists cannot with any show of logic or good faith vote for the extension of the Sheppard-Towner law."

SCIENTIFIC SERVICE COMMITTEE BEGINS WORK

At the September 1, 1926, meeting of the Council for the Illinois State Medical Society a Committee was appointed on Scientific Service for the component societies. Jas. H. Hutton of Chicago was relieved of his chairmanship of the Lay Education Committee, his place being filled by R. R. Ferguson of Chicago, and was appointed to the general chairmanship of Scientific

Service. Ex-officio members of the Scientific Service Committee are: Mather Pfeifferberger, Alton, president; G. Henry Mundt, Chicago, president-elect; H. M. Camp, Monmouth, secretary.

Co-operating with Dr. Hutton for the departments of medicine on which material and speakers are to be provided for county and district societies desiring to use this service have been: Internal medicine—W. H. Holmes; Orthopedics—Philip H. Kreuscher; Tuberculosis—Robert H. Hayes. Valuable contributions to the work have been received from Philip Lewin, Sidney H. Easton, Ralph H. Peairs, C. C. Chapin, Roswell T. Pettit, Frank Deneen, Clarence L. Wheaton, W. H. Watterson, G. B. Dudley, Cecil Jack, Maurice Blatt, C. H. Boswell, E. A. Schlageter, A. Merrill Miller, S. C. Woldenberg, C. H. Tennan, J. T. Gregory, F. F. Maple, E. P. Sloan.

Twenty-seven counties have been served to date and there has been a full consideration of the subject at a Councilor District meeting in Pinckneyville, with J. S. Templeton for the Tenth District; in Macomb, with W. D. Chapman for the Fourth District; in LaSalle, with E. E. Perisho for the Second District; in Shelbyville, with I. H. Neece for the Seventh District; and in Springfield, with S. E. Munson for the Fifth District.

Following is a list of subjects. The Scientific Service Committee will be glad to schedule competent physicians to present one or several of these subjects upon request filed in the office of the society, 58 East Washington Street, Chicago, not less than one month preceding the date of the meeting for which service is desired.

A. MEDICINE

1. Tuberculosis
 - (a) diagnosis
 - (b) treatment
2. Peptic Ulcer
 - Gastric
 - Duodenal
 - Diagnosis
 - Treatment
 - (a) medical
 - (b) surgical
3. Gall Tract Disease
 - (a) diagnosis
 - (b) prognosis
 - (c) treatment—medical
4. Diabetes
 - (a) diagnosis
 - (b) management
5. Respiratory Infections
 - "Flu"
 - treatment
 - The pneumonias

6. Cardio-vascular Disease
 - (a) diagnosis of early heart failure
treatment of early heart failure
 - (b) diagnosis of advanced heart failure
treatment of advanced heart failure
7. Kidney Diseases
 - Simplification of nomenclature and classification
 - Diagnosis (Clarify nephritis and nephrosis)
 - Treatment
8. Goiter
 - Simple classification
 - Treatment of various types (medical, iodine, surgical)
 - Diagnosis of various types, very briefly
9. The Business Side of Medicine
10. Preventive Medicine
 - (a) Community sanitation from the doctors' viewpoint
 - (b) Periodical health examinations
How profitable to doctor and patient
 - (c) Immunizations
11. Empyema
 - General consideration—recognition
 - Treatment
 - Medical
 - Surgical
12. The Endocrines in Everyday Practice
 - Endocrines factors in common complaints such as common colds
 - "chronic rheumatism" or "rheumatoid arthritis"
 - backache, dysmenorrhea, headache, cardiac disturbances, obesity, nephritis, etc.
 - Recognition and treatment
13. Medical Aspects of the Menopause
14. Focal Infection
 - Medical aspect
 - Dental aspect
 - Relation to general medicine
15. Eye, Ear, Nose and Throat Trouble as Related to General Medicine
 - First aid in eye injuries
16. Arthritis—from a medical standpoint
 - Acute—treatment
 - Chronic—diagnosis and treatment
17. Pyelitis or Pyelonephritis
 - Symptoms
 - Diagnosis
 - Treatment
18. Rational Physio-Therapy

B. OBSTETRICS AND GYNECOLOGY

1. Prenatal care
 - Examination—pelvic and general
 - Management of early pregnancy
 - Toxemia
 - Incidental diseases—tuberculosis, syphilis, heart disease
 - Management of late pregnancy
 - Diagnosis of type of pelvis
 - Diagnosis of labor
2. Labor
 - Diagnosis of the position, presentation and shape
 - Mechanism, management, prognosis
3. Abnormal Labor
 - Management of the first, second and third stages
 - Deviation from the normal
 - (a) slow dilatation
 - (b) abnormal mechanism; disproportion between passage and passenger
 - (c) delay in delivery of placenta
 - (d) breech presentation
 - (e) hemorrhage
4. Eclampsia and other toxemias

5. Final examination and treatment of conditions found
 - Mal-positions
 - Lacerations
 - Pelvic exudate
6. Acute Salpingitis
 - Diagnosis
 - Treatment
7. Uterine Fibroids
 - Management
 - Treatment

C. SURGERY

1. Disease of the gall bladder, including a discussion of their influence on other functions of the body and the present-day surgical treatment
2. The diagnosis and treatment of acute appendicitis
3. Efficient first aid treatment
4. Surgery on thyroid, including a discussion of the type of cases, preparation before operation and the best post-operative treatment when necessary
5. Treatment of shock following an injury
6. The acute abdomen. Findings which may lead to a possible diagnosis
7. Treatment of fractures
8. Surgical management of chest diseases and injuries
9. Head injuries

D. ORTHOPEDICS

1. Fractures (special)
 - (a) Malunited and ununited
 - (b) Near and into the joint
 - (c) Spinal column
2. Internal derangement of the knee joint
3. Injuries and inflammation in and around the shoulder joint
4. Peripheral nerve injuries
5. Backache
 - (a) Causes
 - (b) Treatment
6. Arthritis
 - (a) Varieties (clinical)
 - (b) Causes
 - (c) Management
7. Congenital deformities of the bones and joints
8. Infantile paralysis
9. Tuberculosis of the bones and joints
10. Bone and joint diseases of infancy and childhood
 - (a) Rickets
 - (b) Scurvy
 - (c) Lues
- Et cetera
11. Bone and joint tumors
 - (Primary and metastatic)
12. Foot deformities
 - (Etiology prevention, and treatment)
13. Posture
14. Scoliosis
 - (Lateral curvature of the spine)
15. Osteomyelitis

E. PEDIATRICS

1. Principles and technic of infant feeding
2. Nose and throat infections in childhood
3. Essentials in the care and feeding of the newborn
4. The prevention and treatment of heart disease in children

F. MENTAL HYGIENE

1. Nervous and mental hygiene of childhood
 - Its importance. Child study
 - In the nursery, up to 2 years
 - The preschool period, from 2 to 6 years
 - Nursery schools
 - The nervous child—at home, in school, in sickness
 - Insufficient guidance, excessive love

Timidity and fears. Bad temper, disobedience, negativism and delinquency
 Want of sleep and appetite, indigestion
 Breath-holding, habit spasms, stammering, thumb-sucking, air-swallowing, migraine, enuresis
 Need of parental training

2. Mental hygiene during adolescence

Physiological changes at puberty and adolescence
 New problems and adjustments—sex, financial, social, occupational, career, religious, etc.
 The war of the generations (Children vs. Parents)
 The great transition stage from dependent childhood to independent adulthood
 The need of guidance and confidential relations
 The special problems of the boy and girl
 The need of understanding and sympathy

3. The Psychoneuroses (functional nervous disorders)
 Their nature. The emotions. Mental conflicts and their causes

Influence of mind on body. Anxiety and fear
 Types of nervous breakdown: Neurasthenia, hysteria, obsessional neurosis, hypochondria, simple depression and excitement
 Proper treatment

4. Prevention of nervous and mental disorders

Birth injuries. Acute infectious diseases
 Syphilis. Alcohol. Fatigue. Cardio-vascular-renal diseases
 Maladjustments: Mental hygiene of childhood and adolescence, the need of normal satisfaction of the basic human desires and of a wholesome philosophy of life
 Emotional control

5. Psychological healing

Importance and types of same
 Miraculous healings; philosophic methods of treatment; medical moralization; suggestion and hypnotism; treatment by rest and isolation; psychological analysis (personality study); re-education; stimulation; pharmacotherapy; moral guidance.

G. EYE, EAR, NOSE AND THROAT

1. Nose and throat infections
2. Management of ear infections
3. Nasal sinus disease
4. Acute eye inflammations
5. First aid in eye injuries

SUGGESTIONS FOR MEMBERS OF SCIENTIFIC SPEAKERS' BUREAU

The Scientific Service Committee plans to institute a service for members of county medical societies which shall be conducted from the point of view of the consultant rather than of the teacher. The whole point and purpose is to bring to the general practitioner specific helps for his daily practice. For the attainment of this purpose the following suggestions should be borne in mind:

1. The paper should be non-academic. Be concrete, practical and specific in your remarks.
2. The history and bibliography of a given subject should occupy a relatively small proportion of the paper.
3. Talk to your audience as man to man. Many an excellent paper delivered in a patronizing manner has antagonized the audience and wasted the time of the essayist.
4. Remember that attention can be concentrated upon you and your subject in inverse proportion to the size of the audience. Every effort will be made by the

committee to obtain appointments for speakers in larger towns where accommodations are better and audiences substantial, as well as in the smaller communities in which there is, perhaps, the greatest demand for this service. But from the point of view of personal appreciation, the essayist will do well to bring his best to the small audience.

5. Talk clearly and directly. The effective speaker before a lay audience is also the effective speaker before the scientific audience. Doctors are made of the same clay as other folks—subject to the same likes and dislikes. Of two papers equally valuable, they will prefer the one whose speaker they can hear distinctly, who is familiar enough with his subject to get away from his paper frequently, who seem equally as interested in their comments on his ideas as he is in getting his own ideas across.

6. The test, then, of the best paper for the purpose of this committee is that it is practical, that it is presented clearly and simply, that it stimulates and invites discussion. It is better to start folks thinking for themselves along a given line than to give them ready-made thoughts and arbitrary judgments.

IS MEDICINE DRIFTING INTO LAY CONTROL?

Rexwald Brown, in *California and Western Medicine* October, 1926, comments on this important subject as follows:

"A doctor of medicine in active practice in a well-known city takes a rather energetic interest in the progressive development of his municipality. Anent his efforts the editorial columns of a prominent local newspaper assailed him in this wise: 'When Doctor Blank received the degree of M. D. these cabalistic initials meant that he was learned in medicine and not that he was learned in municipalities. The diploma when issued meant that he was fitted to practice medicine and not that he was fitted for the management of municipalities.'

"This editorial point of view is expressive of the general concept of the lay mind toward the participation of the medical profession in affairs other than those of the healing art. All too frequently are heard the statements that physicians do not possess the requisite knowledge in extra medical matters either to have an opinion on or take part in the general movements of concern to society at large. A corollary to this largely accepted conviction is the belief that a physician who concerns himself in any direct way with activities outside his professional fold cannot be

a good physician in whose judgment and skill faith can be held.

"This lay attitude indicative of some people's contempt of or indifference to medicine's deep relationship to all the structure of civilization should concern our profession to a degree apparently not fully appreciated. It is harrowing to read a paragraph in the report of a senior student to his department head, William J. Kerr, Professor of Medicine at the University of California. (*California and Western Medicine.*) Kerr is trying the experiment in medical education of apprenticing senior students to well-known practitioners in the state for a period of a month—a return to the preceptor influence. The student reported, among many impressions, the following: "An old druggist in the town said that after years of experience in this country and in Europe with doctors that they have the narrowest minds . . . of any profession. He is probably correct."

"It would be easy to laugh off these incidents as purely local in character. They deserve attention, however, because they are straws being blown by the wind. Is the place of scientific medicine in the body politic as secure as we have thought? Have we assumed to the full our great responsibilities or are we becoming slack in thought and careless of our position as guides in civilization? Are the aims and ideals of our profession being smothered by the commercialism of the age?

EVIDENCE OF LAY CONTROL

"Into the fabric of society are being woven new patterns of profound import. The world seethes with startling thoughts, impulses and reconstructive purposes in the spheres of religion, politics, economics, morals, education, and sociology. Wider knowledge, to which scientific medicine has made contribution, is the dynamic force in social reconstruction.

"As we survey the movements in progress, a disquieting feature becomes more and more evident which should concern the medical profession as to its gravity. William E. Musgrave in an article of compelling interest in the issue of May 22 of the *Journal of the A. M. A.*, 'Is Universal Life Insurance Coming?' senses strongly the danger which insidiously begins to menace the ranks of organized scientific medicine. This menace is the lay control of medical activities.

"There is a very considerable evidence in affirmation of this growing conviction. Musgrave tells us how the spread of life, health, and accident insurance is engulfing large numbers of medical men as employees of the great insurance corporations. They become salaried men, subordinated to the positions of technicians and subjected to the policies of the companies.

"The movements in the socializing of medicine, as projected or actually in operation, as compulsory health insurance or state medicine, serve to show the partial dominance of the lay mind and that of the politician in the affairs of medicine which embraces the science of public health. Departments of sanitation are frequently subject to political control and manipulation.

"A vast work in educational hygiene and school health supervision is conducted by boards of education in this country. Associated with them are scores of voluntary organizations promoting health instruction, influencing standards and practices, creating public opinion, supplying funds for research and demonstrations, and assisting in the enactment of local and national hygienic legislation. In general this work is under the control and supervision of lay boards associated very loosely or not at all with scientific medicine.

"Hospitals, in many ways the seats of the science and art of medicine, are largely managed and directed, their policies outlined, by lay boards formed of citizens whose social, religious or business standings are pre-eminent, or of politicians elected to positions of control. The few books written on hospital management assume without question that the policies of a hospital should be vested in boards of lay directors.

"In the field of medical education the influence of great universities and of large financial foundations, their respective boards of trustees being very largely of lay personnel, becomes increasingly more pronounced. By promise and by inference of financial help they seek to regulate the placement of medical schools, the adoption of curriculums, and control the selection of and compensation of the teaching professors.

"And in another sphere the man of medicine appears to be largely an adjunct or almost entirely disregarded. This is the sphere of social uplift or service. Its votaries number up into the thousands of lay people, and in organizations galore they further propaganda whose purpose is

to make the world better. They expound and urge action upon, with a zeal which should be better directed, views on subjects such as heredity, birth control, and eugenics which medical men and biologists say are yet in the infancy of study and experiment.

"In the portrayal of these outlined facts there is no intent to belittle the efforts being made by sincere and earnest lay men and women toward a healthier and happier world in which to live. But a note which insistently obtrudes itself throughout all these activities is disparagement of the capacities of physicians as thinkers, doers, administrators, and leaders outside the confines of actual medical practice, and personal relationship of physician to the sick patient.

"Singular it is that doctors of medicine with backgrounds of general education and specific learning acquired over years of study not necessary in most vocations and callings have not the intelligence of storekeepers, financiers, real estate dealers, manufacturers, plumbers, and other lay persons to grasp the principles underlying human endeavor and the knowledge to help formulate the laws conserving the general good of society.

"This lay attitude should deeply concern us as physicians. It is one of the factors which calls forth the utterance of the editor of the Indiana State Medical Journal that within a few years organized medicine will be fighting for its very existence. The time has come for us to take stock of our affairs that we may determine the direction of our future. Why are we deemed impractical, babes in the woods in general affairs, incompetents in the understanding of social and political movements and useful only as technicians in the healing art?

THE WALL OF ALOOFNESS

"The answer is that we have permitted ourselves to be walled off from society at large. It might better be said that we have walled ourselves off. And our isolation has been accomplished so effectively that even many who are sick do not try to look over the walls to see what scientific medicine has to offer for alleviation or cure, but seek relief from cultists and charlatans who park their wonders (?) about the streets.

"Scientific medicine has not expressed itself in a way to compel attention. It lives in an atmosphere of reserve, partial detachment from

the rest of mankind. All reasons for the development of this atmosphere in which we live becomes concentrated in one reason, a code of behavior, which antedates the Christian era. The Hippocratic oath or code as a guide for medical men has become traditional, white with the age of centuries. The principles of ethics of the American Medical Association bear the imprint of this ancient standard.

"But this 'credo' of the profession, called by Gompertz 'a monument of the highest rank in the history of civilization,' when carefully studied is seen to be a moral guide in the relationships between student and teacher physician and between the physician and his patients. And in these relations the 'credo' is and should be as binding today as it was in the days of the best in Greek civilization. The Golden Rule is the essence of the code.

"Though nothing is said in the Oath of Hippocrates about the deportment of physicians in the movements for betterment and enlarged happiness in civilization, the medical mind has become imbued, over a period of centuries, with the conviction that aloofness from matters other than those of personal service to the sick is fundamental to the spirit of the code. How much a feeling has grown no one knows. It exists as do unwarranted traditions in other spheres of thought. And traditional beliefs are all too often strong deterrents to progress.

"Traditional aloofness has become a despot and has made medical men slaves, fearful of the master and fearful of the opinions of the fellow-slaves. Any form of public expression by a physician on matters of medical or general concern, even in the interests of society, is considered by most professional confreres a breach of the professional code. It is looked upon as a form of personal advertising.

"Is this deadening attitude of mind in consonance with our Principles of Medical Ethics? One who carefully reads the context as a whole cannot find therein any sentence which tends to set medical men aside from the general concerns of existence. In truth the very opposite pertains. The first statement in the principle is, 'A profession has for its prime object the service it can render to humanity.' In the chapter entitled The Duties of the Profession to the Public it is stated that 'Physicians as good citizens, and because their professional training specifically

qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interests of humanity.' The concluding statement in the principles is, 'These principles are primarily for the good of the public and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community.'

"Only loyalty of our profession withholds our recognition that public opinion toward us is far from endorsement of us and our methods. Scientific medicine must face the fact, however, that the public has lost confidence in us measurably, not alone as regards our inadequacy in health leadership, but even as competent in the management of disease. The responsibility for this condition rests squarely on the shoulders of medical men.

ORGANIZED MEDICINE LOSING CASTE

"Common sense compels us to admit something is wrong within the structure of organized scientific medicine. We are losing caste, failing to register the worth of our ever mounting knowledge, muffing our opportunities for higher service, and we are in danger of becoming pawns instead of guides in progress. Medical men should be filled with shame that we are unable to acquaint the public with the values our profession can contribute to a growing civilization. Instead we bow our heads to organizations of lay people, as The American Association for Medical Progress, who pitying our poor endeavors, yet believing in us, attempt to do educational work for and in support of us.

"Dr. Phillips, president of the American Medical Association, in his recent presidential address, published in the journal of the American Medical Association, April 24, challenges the public to make use of the brains resident in the body of the medical profession. The challenge should be to the medical profession to make use, of its own volition, of the brains it possesses so that the public may hearken to and act upon the words of organized medicine.

"Granted that shackles binding our efforts must be removed, what is the method of procedure; what is the way of larger influence? Organized medicine itself must open the gates. That we are concerned about the damaging crit-

icisms hurled at us is shown by two reactions in our profession. One is the growing desire to give the public information. This is being done somewhat by the American Medical Association and by a few state societies through publications for lay reading. The other reaction is a demand for changes in the amount and character of the technical courses in the medical schools. There are arguments and papers about entrance requirements, some physicians insisting that medicine's difficulties would be solved by lowered standards of preliminary education; while others say such action would make the position of medicine even less happy than it now is.

THE WAY TO STRENGTH

"Medicine's way to a position of strength in the minds of the people involves a change more profound than informative broadcasting or alterations in the character of pre and actual technical studies. The change must be that of nursing into compelling expression a voice now very weak, which carries, however, the truest note in scientific medicine's structure of service. The highest ideal of medicine is the promotion of individual, community, and national health.

"The teaching of the science of medicine needs drastic revision so that a new tide of thought may sweep through the classrooms of the medical schools. In addition to studies in the science and art of medical practice, new courses must be given inculcating students with knowledge of their high responsibilities as law givers to the people and as teachers of health. Graduates of today tell that during their years of study little or nothing is given them of the history of medicine through the centuries, of the relationship of medicine to life at large, of the forces ever tending to destroy scientific medicine, of the prejudices and ignorance of an indifferent public, of social spheres where the knowledge of the medical man could be useful, and of the worth of medicine in helping to advance civilization. And the subject of medical ethics which looms up so prominently after graduation is given only cursory consideration in most schools. In discussions of medical problems, young physician graduates of outstanding medical colleges have been heard to say that their introduction to ethics consisted of their being handed the Principles of Ethics at or about the time of their graduation.

"Medical education in and out of college needs the attention of the members of organized scientific medicine. The errors of the past, the stupidities of our insularity, our failures to impress humankind of our values to them in all the spheres of life call us to an accounting with ourselves. We, the medical profession, must survey, must reinspect our positions in the light of present-day thought, which is throwing aside the hindrances to progress imposed by precedent, custom, and tradition. Where is scientific medicine heading, what is its concern with the vital problems of today, is its knowledge becoming humanized, and is it bearing aloft the emblems of leadership?

"We medical men have become rather set in our ways. Consider our weekly, monthly or annual medical gatherings. There are hundreds of them—county, special, state, and national medical society meetings. And what is the general order of procedure in all of them? Over 90 per cent. of the time is devoted to the reading and discussion of scientific papers and presentation of clinical material.

"The worth of an adequate number of such meetings is not decried. They are fundamental to the continuous diffusion among us of the discoveries and experiences in the fields of research and clinical medicine. The point is that our increasing familiarity with special fields of knowledge is blinding us to our relationships to life as a whole or is preventing us giving due consideration to our responsibilities in general affairs.

"There must be an awakening to new purposes, new duties and expanded activities if organized scientific medicine is to be other than a competitor for the management of the sick with the pseudo-scientific and the ignorant and fanatical cultists. We must shatter our attitude of reserve and come out into the open as forceful advocates of the great aim of scientific medicine—the promotion of health.

"Health is fundamental to achievement in all spheres of human activity. Scientific medicine should work continuously not only to seek out the laws of health, but also to make these laws operative in a progressive civilization. Scientific medicine, the facts of which are demonstrable and verifiable by observation, experiment and test, needs no defense, but the disciples of medicine who know the facts must learn that it is in-

cumbent upon them to inspire confidence in themselves as expositors of the knowledge.

"Through the avenues of the local, state, and national medical societies must scientific medicine enter the arena of larger human service. Our attack must be first upon the paralyzing routine of our meetings and upon a complaisant acceptance that our learning is for the elect only. Let us have a new order of procedure—half of each meeting or whole meetings at frequent intervals to be devoted to consideration of the matters immediately related to medical practice as to their effect upon our profession and upon society at large.

AN OUTSTANDING EXAMPLE OF MEDICAL LEADERSHIP

"In these meetings we must face the problems which we now ignore and which the public tries to solve with more or less contemptuous disregard of medicine's counsel and guidance. Physicians must develop powers of leadership along all medical fronts. The wider biologic knowledge possessed by physicians as a class enables them better than others to formulate the policies which pertain to municipal and national health and sanitation, to educational hygiene, to medical economics, to hospital management, to social service, to medical education, and to the propagation of a virile race.

"The policies formulated, medical men through intensive, associative effort must be the powers which introduce and influence acceptance of the policies in the life of the world. Is there any reason why we cannot be initiators, administrators and executives in our own fields as business men, financiers, engineers and others are in theirs?

"To say that we cannot is to forget that in the science of medicine there looms forth a figure of unparalleled administrative genius, Dr. W. G. Gorgas, whose life should ever stimulate us to the continued insistence that the public should adopt those scientific measures which create health. Doctor Gorgas, an executive and compelling force in the domain of medicine was the man who made it possible to build the Panama Canal. And until he became acclaimed the world over for his tremendous achievement he was assailed and derided, and his work was interfered with by the lay control in charge of the general administrative business and engineering

conduct of the building of the canal. Noted lay executives and big men of affairs called him a stupid doctor with nonsensical ideas. Yet business acumen and engineering skill would have failed entirely in putting through the canal without the underlying medical knowledge made effective by a capable medical administrator.

THE RESPONSIBILITY OF SCIENTIFIC MEDICINE

"Organized scientific medicine must make itself a dynamic force, respected and honored as basic to all progress. This is medicine's greatest responsibility. Medical men must take the offensive and convince humankind of the wealth of resources in medical science. The worth of the profession should be so splendidly revealed by the labors of physicians that great warmth of respect and support will always be conceded by the public. The place of medical science in the esteem and confidence of the lay mind should be so high that philanthropists would never hesitate to assist financially in the efforts made by the profession to better living conditions and alleviate suffering.

"Medical men should make it obligatory upon themselves to render strict business accountings for the management of public service institutions and other trusts, but the policies directing the expenditures should not be dictated from without the circle of medicine. The rules governing clinical practice, medical research and the management of medicine's activities should emanate from within the profession and not from the lay public, whose efforts are so often dictated by business experience.

"Scientific medicine is a profession whose evolution began as Osler has said in that wonderful Grecian era when Hippocrates lived and received his inspirations from the spirit of the times which asked of all measures, 'Do they make life a better thing?' Business asks, 'Do these measures produce a profit or make expenditures and income balance?'

"A cloak of mystery has far too long been wrapped about the science of medicine. The disciples must tear it aside. The public must be taught that physicians are not in league with occult forces, that medical knowledge, like all other scientific knowledge, is subject to the laws of verifiable fact, that medical knowledge is not divisible into sects, and that no knowledge is of

more worth than that which conduces to self-preservation and the continuance of the race. The studies essential for acquiring such knowledge, the ways of incorporating such knowledge into the fabric of civilization and the methods most valuable in acquainting the public with fundamental medical truths are pre-eminently the affairs of organized scientific medicine and not those of the lay public."

BIRTH CONTROL A COROLLARY OF THE SHEPPARD-TOWNER BILL

BIRTH CONTROL IS INDORSED BY N. Y. WOMEN —LEGISLATION TO PERMIT PRACTICE IS URGED

According to the Associated Press dispatch the New York League of Women's voters at its annual convention at Syracuse, December 2d, indorsed legislation designed to permit the practice of birth control. This was done despite the continuance of strong opposition which has prevented its consideration at previous gatherings.

By a vote of 53 to 42 the league went on record as favoring the practice and the endorsement was embraced, in its legislative program. To the last, however, sentiment for and against was almost evenly balanced, and on the first vote the motion for approval lost, 45 to 43. A recount was demanded by both sides, with the resulting endorsement.

The proposal on which the convention voted was as follows:

"Amendment to penal code permitting physicians to give contraceptive prescriptions to married women. This changes the present law, which makes it a crime for physicians to give birth control treatment or information to any one except married women suffering from illness or disease.

"The proposed amendment extends this exception so as to permit physicians to give such information to any married woman who may care to seek it."

The action of the league forecasts a more heated struggle than ever at Albany if a birth control proposal is introduced at the 1927 session of the legislature.

In other years bitter verbal fights have ensued in committee hearings on the subject, but the measures never have gone beyond the committee stage.

Miss Dorothy Kenyon, chairman of the league's legislative committee, who presented the proposal to the convention together with the other points in the legislative program, urged its indorsement on the ground that it was corollary in purpose with the Sheppard-Tower bill now pending in congress.

EXPERTS TO CHECK BIRTH CONTROLLERS

THEIR SOPHISTRIES TO BE EXPOSED AND THE HARM OF PRACTICES ADVOCATED POINTED OUT

In London, England, a new society to combat the theory and practice of contraception has been started under the presidency of the distinguished gynecologist, Dr. Frederick J. McCann, with the title of the League of National Life. Dr. Halliday Sutherland, who initiated a noted House of Lords appeal against a decision given in favor of Marie Stopes, is acting secretary.

Dr. Sutherland stated that the League would expose the moral evils associated with the practice of contraception, and would educate public opinion concerning its serious physical results, which have earned the condemnation of leading physicians and surgeons in Europe and America. Furthermore, the League would remind the people of England that the experience of history shows the practice of contraception to be associated with national decline.

The League of National Life is undenomination and non-political, states Dr. Sutherland, who says that sub-committees are being appointed to consider and report on the ethical, medical, sociological, legal, economic and statistical aspects of contraception.

"For example," says Dr. Sutherland, "the ethical sophistries of the contraceptists will be answered by ethical experts; the medical misstatements of the advocates of contraception will be answered by expert gynaecologists; the statistical blunders of our opponents will be exposed by statisticians."

WHY STUDY MEDICINE?

PARIS PH.D.'S PAID LESS THAN CITY "WHITE WINGS"

From Paris, France, comes reliable information that the leaders of the French intellectual world are growing deeply alarmed at the way in

which the most brilliant French students are deserting the learned professions for business careers. Unless something can be done to check this tendency, they feel that France soon will lose her eminent position in the world of science and learning.

Under present economic conditions, a learned career means a life of gilded poverty. A young man graduating among the first twenty from the Polytechnique, one of the greatest scientific post-graduate schools in the world, has an earning capacity inferior to that of a city street sweeper.

Correspondence

DOCTORS GET CONCESSION AT THE MUNICIPAL CONTAGIOUS DISEASE HOSPITAL

The Scientific Service Committee (recently created) of the Illinois State Medical Society, requested the Commissioner of Health of Chicago to admit physicians to the Municipal Contagious Disease Hospital, Chicago. The following correspondence speaks for itself and indicates a favorable trend of the times toward the recognition of organized medicine in all affairs dealing with Public Health and Welfare.

DEPARTMENT OF HEALTH
CITY OF CHICAGO

November 18, 1926.

Dr. James H. Hutton,
Chairman, Scientific Service Committee,
Illinois State Medical Society,
Chicago, Illinois.

Dear Dr. Hutton:

I am in receipt of your letter of November 5, in which you ask permission for the members of the Illinois State Medical Society to be admitted to the Municipal Contagious Disease Hospital.

Personally, I think this is an excellent idea and that you are to be congratulated for offering this service to the members of our Society.

The medical service of the Municipal Contagious Disease Hospital has been placed under a committee of four men, one from each of the large medical schools and Dr. Ernest E. Irons is the chairman of this group. In order that there might be no conflict at the institution I

sent your communication to Dr. Irons and he replied as follows:

"Dear Dr. Bundesen:

I think, with you, that the proposed plan to make the facilities of the Contagious Disease Hospital available for physicians to come in and see acute contagious diseases is a fine one. It is directly in line with our plan to make the hospital an educational factor in the medical community. A contribution which thus will be made is just as important whether made to individuals or to groups in schools, so that I should be very glad to give my personal approval, to the plan referred to in the letter, always assuming that the necessary precautions will be taken against exposure and spreading of contagion by persons not fully conversant with the necessary preventive measures.

Very sincerely yours,

(Signed) ERNEST E. IRONS."

In accordance with the above proposal, therefore, we would be glad to honor the membership card in the State Medical Society for admittance into the Municipal Contagious Disease Hospital group. It would greatly aid matters if we could be notified several days in advance when members are expected to be with us.

Assuring you of my desire to be of service to you, and with kind personal regards, I am

Sincerely,

(Signed) HERMAN N. BUNDESEN,
Commissioner of Health.

WOMEN PHYSICIANS AND THE SHEPPARD-TOWNER BILL

November 26, 1926,
Chicago, Illinois.

Could I have a number of extra copies of the *JOURNAL* for the Sheppard-Towner Bill remarks for club speaking? It seems a pity that more is not done to let these people know the correct facts, for as far as I can learn it is gaining in favor. Again, the symposium on the work done in States being issued in the *Women's Medical Journal* is giving one side, why not mail a copy of the November issue, penciled, to the editor for the other view? If 4,000,000 club women have agreed to back it we will have some fight to stop it.

McCall's Magazine, page 62, December Number, has an article, "Damaged Lives" by Dr.

Charles Gilmore Kesley, is another evidently desiring it. There are others, the City Club, under Mrs. Murphy, etc.

VIDA A. LATHAM, M. D.,
Chairman of Publicity,
Women's Medical Club.

1644 Morse Avenue.

POSITION FOR PHYSICIAN POSSESSING LITERARY ABILITY

New York, Nov. 11, 1926.

To The Editor:

We are desirous of securing the services of a physician for literary and similar work. He must not be over forty years of age, and must be capable of translating readily from the German. We require that he devote his entire time, from 9 A. M. to 5 P. M. daily, except Saturday (9 to 1 P. M.), to our work and at our offices in New York City.

If you know of anyone who you think would serve our purpose, we would certainly appreciate it if you would be so kind as to place us in communication with him.

Yours very truly,

WINTHROP CHEMICAL CO., INC.
117 Hudson St.

AN ATTEMPT TO SECURE ANTI-VIVISECTION IN ILLINOIS

To The Editor:

The attached copy of letter, which is self explanatory, is sent you for your information.

Very truly yours,

ISAAC D. RAWLINGS, M. D.,
Director of Public Health.

AMERICAN ASSOCIATION FOR MEDICAL PROGRESS, INC.

A NATIONAL LAY ORGANIZATION

370 Seventh Avenue, New York City.
November 9, 1926.

Dr. Isaac D. Rawlings,
Director of Public Health,
Springfield, Illinois.

My Dear Dr. Rawlings:

At the meeting of the "International Antivivisection Congress" in Philadelphia during the week of October 18, a report was made of the activities of the "Vivisection Investigation Conference," which claims to be supported by some sixty antivivisection societies scattered throughout the country.

Among other things presented in this report was the announcement that attempts to secure antivivisection

legislation would be made in six to eight states, of which Illinois is one.

I am writing this as I think that you will be interested to know the situation, if you are not already informed, and to ask whether you have any plans for meeting legislative efforts that would interfere with medical research, in case legislative action is attempted.

I should be glad to receive any suggestions as to what our association can do to be of help.

Yours very truly,

BENJ. C. GRUENBERG,
Managing Director.

AGAINST RENEWAL AND EXTENSION OF
THE FEDERAL MATERNITY ACT AS PRO-
POSED IN THE PHIPPS-PARKER BILL
(S. 2696—H. R. 7555)*

When the Moscow Communists in America, in July, 1923, organized a Communist "Federated Farmer-Labor Party," it was *too red* even for radicals like John Fitzpatrick, of Chicago, the old "Farmer-Labor Party" and the Non-partisan League, who withdrew; and in 1924, when it invited Senator LaFollette to address its St. Paul convention, he scathingly denounced it.

But the *Women's International League*, along with the Communist Workers Party, the Proletarian Party and various other Communist organizations, is listed in *The Worker*, official Communist organ, July 21, 1923, as one of the organizations represented at this convention of Communists.

For further proof of the Communist nature of the "peace program" of the W. I. L., the attention of Senators is invited to the W. I. L. "cashier" for "A New International Order" adopted by the last W. I. L. International Congress at Washington, May 7, 1924, which provides for the government of the world's labor, raw materials and food supply by an International representing trades and occupations in each county—a *straight Soviet System*—although the W. I. L. carefully avoids calling it by its right name.

That the W. I. L. leaders have been advocating such doctrines for years, is shown by the following report of a speech by Miss Jane Addams immediately after America entered the World War:

"We should have a central distribution system for the world, administered by a commission located in Athens, Greece," said Miss Addams. *'This commission should have charge of the food of the world and should prescribe the treatment of the people of the world.'*"

The only basic difference between the scheme of Miss Addams and that of the Communist International at Moscow for central dictatorship over the "distribution system," "food of the world" and "treatment of the people of the world" is that Miss Addams favors Athens, instead of Moscow, as the capital of world Communism. The reported speech by Miss Addams quoted above, appeared in the *Chicago Herald*,

May 8, 1917, and has never been denied or modified by Miss Addams to our knowledge.

BOLSHEVISM AS "BREAD AND PEACE"

In her own book, "Peace and Bread in Time of War," by Miss Jane Addams, issued in 1922—taking the revolutionary slogan of the Bolsheviks as her title, as she admits, "not because the first two words were the touching slogan of war-weary Russian peasants, but because peace and bread had become inseparably connected in [her] own mind"—Miss Addams shows conclusively that she desired the aftermath of the war to be International Communism. Her chapter, "A Food Challenge to the League of Nations," (pp. 199-222) cannot be fairly interpreted otherwise than as a restatement of her Chicago speech, advocating centralized, international control of the world's food. Among other things, she writes:

"Must not the League evoke a human motive transcending and yet embracing all particularist nationalisms, before it can function with validity?" (p. 201).

"During the first year of the League the popular enthusiasm seemed turned to suspicion because it was so indifferent to the widespread misery and starvation of the world; . . ." (Ibid).

"In their earlier days men so lived that each member of the tribe shared such food and safety as were possible to the whole." (p. 205).

"Human nature . . . has never quite fitted its back to the moral strain involved in the knowledge that fellow creatures are starving . . . it has lain at the basis of many religious communities and social experiments and in our own generation is finding extreme expression in governmental communism. In the face of the widespread famine following the devastation of war, it was inevitable that those political and social institutions which prevented the adequate production and distribution of food should be sharply challenged. Hungry men asked themselves why such a situation should exist, when the world was capable of producing a sufficient food supply." (p. 206).

"To different groups of men all over the world therefore the time had apparently come to make certain that all human creatures should be insured against starvation." (p. 207).

"The demand for food was recognized and acknowledged as in a great measure valid, but it was being met in piecemeal fashion while a much needed change in the world's affairs threatened to occur under the leadership of men driven desperate by hunger." (207-208).

"If from the very first the League of Nations . . . had evinced the daring to meet the new demands which could have been met in no other way, then, and then only would it have become the necessary instrumentality to carry on the enlarged life of the world . . ." (208).

" . . . For two years after the war the League of Nations was in dire need of an over-

*From The Board of Directors of The Woman Patriot Publishing Company.

mastering motive forcing it to function and to justify itself to an expectant world." (209).

"But what could have afforded a more primitive, genuine and abiding motive than feeding the peoples of the world on an international scale." (p. 209).

"Such a course would have forced them to . . . the function of recognized international Economic Council for the control of food-stuffs and raw material, the world-wide fuel shortage." . . . (210).

"The situation presented material for that genuine and straightforward statesmanship which was absolutely essential to the feeding of Europe's hungry children." (210).

"The adherents of the League often spoke as if they were defending a too radical document whereas it probably failed to command wide-spread confidence because it was not radical enough." (211).

"It was self-evident that if the League refused to become the instrument of a new order, all the difficult problems resulting, as least in their present acute form, from a world war, would be turned over to those who must advocate revolution in order to obtain the satisfaction of acknowledged human needs." (212).

" . . . the League of Nations must abandon its political treatment of war worn Europe and consider the starving people as its own concrete problem. . . . If the coal, the iron, the oil and above all the grain had been distributed under international control from the first day of the armistice, Europe might have escaped the starvation from which she suffered for months." (p. 213).

Can this be considered as anything else but an argument that if the League had appealed to *proletarian hunger*, and promised International Communism, it could have found a "human motive transcending" the desire for private property and the duties of patriotism? Can it be denied that Miss Addams criticises the League for not promising bread and centralism to break down nationalism and private property—"above all the grain" in the farmer's cribs to be "distributed under international control?"

MISS ABBOTT'S RECORD AS A PACIFIST

Miss Grace Abbott, Chief of the Children's Bureau, is one of the two "consultative members" of the executive board of the Women's International League. There are only *two* such officials in each country, who probably constitute the most powerful *inner ring* in control of the W. I. L., as no list of them is published, and the other member in America has not been announced. Miss Abbott's colleague may be Miss Anna Louise Strong, Mrs. Kelley, or some other person with a record too radical for the W. I. L. to advertise.

At the Fourth International Congress of the W. I. L., at Washington, May 1-7, 1924, Miss Jane Addams, international president, announced Miss Abbott's position as "consultative member" of the executive board, and the announcement is also made in an official report

of the W. I. L. held by your petitioners in proof of this statement.

At the original "Internationaler Frauenkongress" called at The Hague in April, 1915, at which the organization now known as the Women's International League (it has changed its name several times) held its first "International Congress of Women," Miss Grace Abbott introduced a resolution for *dismantling the fortifications of the Panama Canal*, and making it and other international waterways "*a property of all the nations*." Miss Abbott made a speech criticising the United States for fortifying the Panama Canal, which was quoted in the Congressional Record, May 31, 1924, and may be seen in full text in the official proceedings of the Internationaler Frauenkongress, April 28-May 1, 1915, pp. 147-148, issued by the Women's International League.

That original "Internationaler Frauenkongress" at The Hague, in 1915, was gathered together chiefly by Frau Rosika Schwimmer, of Hungary, who came to the United States in September, 1914, as secretary of the International Suffrage Alliance (of which Mrs. Carrie Chapman Catt was then president) but Frau Schwimmer was "in reality a German agent," says the Revolutionary Radicalism report of the New York Legislature, 1919, (Vol. 1, p. 971).

After accompanying Mrs. Catt in a visit to President Wilson, September 14, 1914, at which alleged petitions from "the women of the world" of an "immediate armistice" were presented (just after the German repulse at the first Battle of the Marne and the high tide of German penetration and occupation of France) Frau Schwimmer conducted a lecture tour, enlisted American women in a "Woman's Peace Party," gathered a delegation for the "International Frauenkongress" in 1915, organized the Ford "Peace Ark" expedition and other ventures, all having the common object—to "keep us out of war" with Germany and get America to demand "peace," with Germany occupying nearly all of Belgium and a fourth of France.

Miss Grace Abbott, at the Internationaler Frauenkongress, regarded Frau Schwimmer's propaganda as "especially fortunate" for American women to have as it "told us what our duty was," saying:

MISS ABBOTT: "The United States women have been especially fortunate in having with them during the last months Mme. Schwimmer, who told us in the same way as she told you what our duty was. . . . We therefore bring in an amendment which comes forth from American experience." (Internationaler Frauenkongress proceedings, 1915, p. 147).

Miss Abbott thereupon denounced the United States for fortifying the Panama Canal and proposed that the Canal "shall be a property of all nations." (Ibid., p. 148).

After the war, Frau Schwimmer became "Hungarian Bolshevik Ambassador to Switzerland," (Revolutionary Radicalism report, N. Y. Legislature, Vol. 1, p. 971) and some time after the fall of the Hungarian Revolution, returned to the United States—and for several years past has been making her headquarters

at Hull House, Chicago. Frau Schwimmer was also one of the chief speakers at the Fourth International W. I. L. Congress at Washington, May 1-7, 1924.

"NONCOMMUNIST HANDS"

Judge Ben Lindsey, of the Denver Juvenile Court, was also one of the assistant propagandists in the seven-year campaign to establish the Children's Bureau. He came to Washington, with the head of the Colorado "Society for the Protection of Children and Animals," in 1909, to speak with Mrs. Kelly and others for a Children's Bureau at the 1909 hearings.

In 1912, just before the establishment of the children's Bureau, Judge Lindsey triumphantly wrote, in a signed article in the *Woman's Journal*, February 10, 1912:

"An economic earthquake has shaken the 'old home' to pieces. The foundations are crumbled, the walls are spread, the winds of the world blow through. . . . The Nation, the State, the municipality, these have stepped in, assumed practical control of the family in its most intimate relations, and are overparents. . . . If I were a woman in 1912, these two fundamental things—the real meaning of politics and *conception of government as an overparent*—are what I would consider primarily and resolve upon understanding."

Thus, it has been shown not only that the establishment of the Children's Bureau, as the *Woman's Journal* (April 6, 1912, p. 107) declared, was the "*outcome of seven years of indirect influence by Mrs. Florence Kelley*"—a revolutionary Communist trained by Frederick Engels—and "many other earnest women" whose radicalism has been shown scarcely less than that of Mrs. Kelley, but it is also demonstrated that even the mildest "non-communist hands" who helped build the Bureau, such as Judge Ben Lindsey and *The Woman's Journal*, held this "conception of government as an overparent" and glorified it, as much as any revolutionary Communist has done.

(B) ORIGIN AND PASSAGE OF THE MATERNITY ACT OF 1921

The original Maternity Act was introduced by Miss Jeannette Rankin (now field secretary of Mrs. Kelley's National Consumers League) July 1, 1918, within a month after the Supreme Court had held the First National Child Labor Law unconstitutional, June 3, 1918 (*Hammer vs. Dagenhart*). House hearings were held, January 15, 1919. Miss Julia C. Lathrop, then Chief of the Children's Bureau, was away on a junket to Europe, investigating "maternity systems" and "infant welfare" in Central Europe, making her headquarters mostly in Prague.

Several mere physicians from the Children's Bureau attended the hearings, but Mrs. Kelley assumed her customary leadership, saying:

"It is remarkable that Uncle Sam should care so much for the young lobsters and so little for the American children. I talked with the Chief

of the Children's Bureau about this bill before she sailed. She wished it made clear. . . .," etc., etc. (House Hearings, Labor Committee, January 15, 1919, p. 38).

Mrs. Kelley went on to explain why certain words were put into—"Miss Rankin's" bill.

THE "HEROD" CAMPAIGN AGAINST CONGRESS

As previously noted, Mrs. Kelley also headed the "Maternity Act Drive" of 1920-1921, as chairman of the Maternity Act "Subcommittee" of the Women's Joint Congressional Committee.

Mrs. Kelley also headed the publicity drive to make the country believe Congress a body of Herods. In addition to magazine and newspaper article, such as "Women and Children Last," by Mrs. Kelley, "Pictorial Review," (February, 1921) Mrs. Kelley repeatedly flaunted the Herod charge before Congress. She declared:

"The question that is arising amazingly in people's minds now is, Why does Congress wish to have mothers and babies die? Why does it wish to have this go on?" (Senate Hearings on S. 3259, May, 1920, p. 52).

Again, she made a direct threat to use this Herod charge publicly until Congress passed the bill:

" . . . If Congress adjourns without having taken effective action—no mere committee report will answer; we want a committee report, but we want a committee report as a basis for action . . . if this bill is not passed; it will be one of the most interesting questions that will go on and on in the press, because our organization will see that it does go on, if no other organization does. Why does Congress continue to wish to have mothers and babies die? (Ibid., p. 53).

The Chairman (former Senator Joseph I. France) meekly inquired:

"Have you any answer to that question, Mrs. Kelly?"

MRS. KELLEY: "We look to Congress for the answer." (Ibid.)

At the next hearings, Mrs. Kelley hurled the Herod accusation—and threat—into the faces of Congressmen even more insolently:

"This is the week of the Child, who was born and laid in a manger; and this is the time when people's minds turn especially to the children; and those people who will go to church on Christmas Eve and on Christmas Day will be reminded, not only of the Child who was born that day, but of the circumstances under which that Child was born. *And the story of Herod will be in everybody's mind.*

"We do not know how many children were slaughtered by the order of Herod; history does not record that. But the deaths of those children have remained in the minds of the human race for nearly 2,000 years; and the Congress now, after

its long delay and its failure to interest itself in these daily deaths of 680 children—or 20,000 children a month—has to choose where it will be recorded in history.” (House Hearings, H. R. 10925, December 20-29, 1920, p. 27).

Again:

“What answer can be given to the women in a myriad of organizations, who are marveling and asking, ‘Why does Congress wish women and children to die?’” (Ibid., p. 29.)

This is the sort of publicity, pressure and argument that was used by this Communist legislative general in favor of a bill providing nothing whatever but “investigations and reports,” salaries, traveling expenses, administration, etc., and that prohibited the use of a cent of the fund for maternity and infancy “equipment,” maternity hospitals, etc.

And yet, when Senator Moses introduced a bill for maternity hospitals, and the training of women in maternal nursing, this powerful Communist was able to *kill it in ten minutes*, and exclude it from the Senate hearings, by calling it “bricks and mortar,” etc., as previously shown.

Can it be denied that the entire campaign for this legislation has been one of insolent threats, juggled statistics, false charges against Congress and constant fraud and trickery to capture control of all American mothers and children?

Although the two Federal Child Labor laws, declared unconstitutional, are dead, brief review of their history is necessary to illustrate the methods of the same group of lobbyists regarding pending legislation.

(C) ORIGIN AND PASSAGE OF NATIONAL CHILD LABOR LEGISLATION

Here again Mrs. Kelley is first and foremost. She says:

“I made a speech 15 years ago in Washington at which Senators and Congressmen were present, when I reproached them about their zeal for hogs and boll weevils and ticks in comparison with what they did and left undone for the working children; and they took it to heart enough to pass a very poor, feeble child labor law for the District of Columbia in 1906.” (Senate Hearings on S. 3259, May, 1920, p. 52-53).

Mrs. Kelley began the campaign for uniform child labor legislation in 1889, with a pamphlet entitled, “Our Toiling Children.” In 1902, the National Consumers’ League (of which Mrs. Kelley was and is general secretary) started the “invidious comparison” method of attacking State legislation. In 1903 a New York State Child Labor Committee was formed, and in 1904, a National Child Labor Committee, with Mrs. Florence Kelley, Miss Jane Addams and Miss Lillian D. Wald on the original Board of Trustees. Mrs. Kelley also interested the General Federation of Women’s Clubs and the National American Woman Suffrage Association in uniform child labor legislation, becoming vice-president of the latter, in 1905. At the same time John Spargo, then a Socialist leader (who turned against Socialism, however, in 1917, and

who *denounced and opposed* the Child Labor Amendment in 1924 as “foolish and dishonest, insincere and uncandid,”) wrote “The Bitter Cry of the Children,” which became popular among Socialists, not only, but many others. In 1906, Senators Beveridge and Lodge were persuaded to introduce national child labor laws. But, as Mrs. Kelley says:

“Lingering doubts as to the power of Congress to deal with child labor beset the minds of members of the National Child Labor Committee, and deprived Senator Beveridge of whole-hearted, unanimous backing of his bill.” (The Federal Child Labor Law, by Florence Kelley, Survey, Aug. 26, 1916).

The first legislative success was scored by Mrs. Kelley in the “hog story” campaign leading to the District of Columbia law of 1906. In 1907, Owen R. Lovejoy, a Socialist, became general secretary of the National Child Labor Committee. In 1908, as previously shown, the Socialists in their National Convention, made prohibition of “the interstate transportation of the products of child labor” one of their chief industrial “immediate demands.”

The National Child Labor Committee, with its “lingering doubts,” did not come into the campaign wholeheartedly until 1915. Even its pamphlet, “The Extent of Child Labor Officially Measured,” issued in November, 1914, does not *mention the necessity of a Federal law*, the National Child Labor Committee having other official “objects”; “to promote the welfare of society with respect to the employment of children in gainful occupations; to investigate and report the facts concerning child labor; to raise the standard of public opinion and parental responsibility with respect to the employment of children; to assist in protecting children by suitable legislation against premature or otherwise injurious employment; to aid in the enforcement of laws relating to child labor; to coordinate, unify and supplement the work of State or local child labor committees,” etc.

In 1915, however, the National Child Labor Committee was swung into line behind the Socialist “immediate demand” of 1908—for prohibition of interstate transportation of the products of child labor—and a Federal law became its “one controlling purpose,” its “most important work,” (National Child Labor Committee Bulletin, November, 1915) and “Help Us to Secure a Federal Law,” the slogan on all its literature. It held two conventions in 1915 to promote a Federal child labor law, one at Washington, January 5-6, 1915, to influence Congress, and one at San Francisco, May 28-31, 1915 (to take advantage of the Pan-American Exposition) at both of which Mrs. Kelley spoke on “Child Labor and Illiteracy,” “Child Labor and the Consumer,” and “Responsibility of the Federal Government,” while Miss Jane Addams, and Miss Julia C. Lathrop, then Chief of the Children’s Bureau, spoke on “The Child, a Ward of the Nation.” Immediately after the 1915 Washington convention of the National Child Labor Committee, Federal Child Labor laws were introduced in the House, Jan. 26, 1915, by Representative A. Mitchell Palmer, and in the Senate,

February 21, 1915, by Senator Robert L. Owen. It passed the House, February 15, 1915, by 233 to 43, but was killed in the Senate by objections of Senator Lee S. Overman, March 4, 1915. In the next Congress, the Keating-Owen Bill to prohibit the interstate transportation of the products of child labor, was passed, notwithstanding the fact that the House Judiciary Committee had held that "Congress could not possibly pass a child labor law." (Child Labor Bulletin, May, 1916, p. 56).

And thus, in spite of an adverse opinion by the House Judiciary Committee, and the "lingering doubts" of the National Child Labor Committee itself, as well as of many Congressmen, this part of the Kelley Program, dating back to 1889 on her part, and following the "immediate demands" of the Socialist National Convention of 1908 to the letter, became an Act of Congress, approved September 1, 1916 (Public 249, 64th Congress). It was held unconstitutional, June 3, 1918, by the United States Supreme Court; passed again as a "tax on employment of child labor," in the Act of February 24, 1919 (Public 254, 65th Congress), held unconstitutional, May 2, 1919, by Federal Judge James E. Boyd, at Greensboro, N. C., and three years later, May 15, 1922 held unconstitutional by the United States Supreme Court in *Bailey v. Drexel Furniture Co.*

It has already been shown how the Children's Bureau after the first Federal Child Labor Law was held unconstitutional, promoted the Maternity Act, and the Education Bill, as "indirect" methods of standardizing children and education.

Also, it has been shown in this Memorandum that Miss Grace Abbott (administrator of the first Federal Child Labor Law) and Miss Julia C. Lathrop, began a political campaign to interest the National League of Women Voters and the National Woman's Party in an amendment and a "Maternity Act" shortly after Federal Judge Boyd had held the Second Federal Child Labor Law unconstitutional.

The determination of this Children's Bureau to circumvent the Constitution and the Supreme Court's decision is also illustrated in the 1919 Annual Report, where the Chief admits that the Bureau began a "Back-to-School drive" as a measure "to decrease child labor" (Annual Report, Children's Bureau, 1919, p. 9) and called an international conference to frame "minimum standards for the health, education and work of normal children and for the protection of special classes of children in the United States." (Annual Report, 1919, p. 13).

In addition, the Bureau Chief (then Miss Lathrop) expressed hope that the "standards" of this international conference for "children of the United States" might prove a strong influence in securing attention to two "measures worthy of consideration" which "are really implicit in the standards," as she said:

"1. Federal aid to State for universal elementary education for the prompt and immediate abolition of illiteracy and of child labor.

"2. Federal aid to States for the universal pub-

lic protection of maternity and infancy." (Annual Report, Children's Bureau, 1919, p. 24).

There, officially stated by the Chief of the Children's Bureau, is the proof of that Bureau's resort to an international convention and its "standards," and to the Education Bill and the Maternity Act ("implicit in the standards") for securing control of American children by a central Bureau, regardless of the Constitution and the courts!

INTERNATIONAL CONTROL OF CHILDREN

Not only did the Children's Bureau call an international conference of foreigners to frame "minimum standards for the health, education and work of normal children and for the protection of special classes of children in the United States" (Children's Bureau Annual Report, 1919, p. 13), but it has constantly sought to subject all American legislation for children to foreign "standardization."

The Children's Bureau Annual Report, 1919, also declares:

"Child welfare is a national, even international, problem of first magnitude and . . . the economic aspects of the problem are now most urgent." (p. 29)

Miss Grace Abbott, Chief of the Children's Bureau, in a signed article in the radical *New Majority*, September 1, 1923, and in the *New York Call* (Socialist organ), September 23, 1923, urges the "Child" Labor Amendment, with the following as one of her main arguments:

"A large part of the civilized world has adopted not only a national standard but an international standard with reference to the employment of children. The most important nations of Europe have joined in a child labor convention drafted at the International Labor Conference (of the League of Nations). . . .

"Ought it not to be possible for Congress to say that in no section of this country will children be allowed to work below standards now established by international agreement among many nations?"

Miss Grace Abbott served as "unofficial American observer" in 1923, on the Commission on International Traffic in Women and Children of the League of Nations. (*Woman Citizen*, Aug. 25, 1923, p. 18.)

Miss Abbott is quoted in the same article as saying:

"It might well be argued that the problem of securing world peace is a fundamental problem in child welfare. . . . To prevent war, we shall need certain guarantees for children." (*Woman Citizen*, Aug. 25, 1923, p. 18.)

Shortly after Miss Abbott's service as "unofficial observer" on the Commission on International Traffic in Women and Children, there began to appear in the press frequent dispatches regarding international control of children. For example:

"Henceforth the children of the world will be under the protection of the League of Nations. . . . The Council of the League, with the con-

sent of the interested parties, has authorized the concentration of all child-welfare activities here. A special department will be created by the *League to handle all matters concerning the protection of children.*" (Geneva dispatch to *New York Times*, March 16, 1924.)

"GENEVA, Sept. 19.—Steps have been taken in the commissions of the League of Nations Assembly to place children under the protection of the League. The projects provide for reorganization of the permanent Commission on Traffic in Women and Children under a new name, with two groups of experts, one for questions relating to traffic in women and children and the other for *all matters promoting the welfare of children.* The latter group will include representatives of the principal associations concerned with children, especially the International Federation for Promoting Child Welfare, with headquarters at Brussels, the work of which will henceforth be undertaken by the League." (Geneva dispatch to *New York Sun*, Sept. 19, 1924.)

In addition, Albert Thomas, French Socialist, head of the International Labor Office, was brought to America to lobby for the *Child Labor Amendment.*

The testimony of Thomas for the amendment appears at page 73 of the Senate Hearings on Child Labor, Jan. 10 and 15, 1923, Part II.

Thomas admitted, after some dodging, that he is a Socialist (p. 78) and that he represented the *International Association for Labor Legislation*, as well as the Labor Office of the League of Nations. (p. 76.)

The "International Association for Labor Legislation" is a product of the *Second Socialist International*; the Socialists, after their defeats in 1848 and 1871 in attempting revolution "by force and violence," going in for revolution by *fraud and legislation*, in the name of "labor" "consumers' leagues," "workingmen's associations," etc., etc.

Is it not almost inconceivable that the League of Nations, solemnly pledged to respect "the territorial integrity and political independence" of all nations—and most eager to get the United States as a member and not to offend American sentiment—should thus inject itself into the most *intimate*, local and domestic affairs of the American people, unless it had been *urged and invited to do so* by the same Federal Bureau of internationalists that brought Japs and others here to standardize American legislation for children, in 1919?

Among other things, Albert Thomas (head of the International Labor Office of the League of Nations) said:

"We have, in addition, a proposition to protect the children before birth. . . . You see, gentlemen, it is, I believe, a full development of this effort of international protection." (Senate Hearings, Jan. 15, 1923, p. 76.)

"In the first conference we voted also a draft convention for the situation of children in *agricultural work* . . . children under the age of 14 years may not be employed or work in any public

or private agricultural undertaking or any branch thereof except outside of the hours fixed for school attendance. . . .

SENATOR SHORTRIDGE: "Do you mean farm labor?"

MR. THOMAS: "Yes, sir; farm labor." (Ibid. 76-77.)

That the League Labor Office has been acting under "unofficial" American suggestion in these matters is indicated by the following dispatch (at a time when the fate of the Child Labor Amendment was hanging in the balance):

"GENEVA, Feb. 13.—*At the request of Miss Abbott*, of Washington, the initial meeting of the League of Nations Reorganized Commission for the Protection of Women and Promotion of Child Welfare, scheduled for next week has been postponed to May 20." (*N. Y. Evening Post*, Feb. 13, 1925.)

The League was apparently told, however, that it could go ahead with international "education" propaganda. Thus:

"GENEVA, Feb. 18.—The League of Nations is taking a new step to educate the youth of all countries in the ideals of world peace, with the encouragement of contact between the young people of different nationalities. . . . The League believes that the basis of the suggested education of the younger generations should be teaching the principles and work of the League of Nations as training in international cooperation and normal methods of conducting world affairs." (Associated Press, Feb. 18, 1925.)

Does it not appear that the League was asked to postpone its "child welfare" meeting—until after the Child Labor Amendment was acted upon by the many legislatures in session in January and February, 1925—only because it was feared that the appearance of League interference then would be resented by our legislators and react against the Amendment?

On the other hand, after 32 State legislatures had rejected or refused to ratify the Amendment, up to April 1, 1925, the League Labor Office was apparently requested to exert *international pressure* for reconsideration.

Thus the following dispatch:

"GENEVA, April 2.—(Associated Press) Child labor conditions in some sections of the United States were condemned today by labor members of the Governing Board of the International Labor Office, which opened a three days' session.

"Yan Oudegest, president of the Dutch Labor Federation, and Leon Jaudaux of France, president of the General Federation of Labor, urged publication by the Bureau of all possible information on conditions in America, expressing the belief that *world public opinion could thus be brought to bear on the Americans* and culminate in an improvement. . . .

"The discussion of conditions in the United States was the sequence of the recent apparent re-

jection of an amendment to the Constitution authorizing Federal laws on the subject of child labor and arose from a fear of labor leaders that rejection of the proposed amendment would prevent an amelioration of the conditions of children in certain States. *The American conditions were discussed together with those in the mandated countries and China.* (New York Times, April 3, 1925, p. 21.)

The same dispatch, however, explains that Albert Thomas told the Governing Board of the Labor Office that it had "no right to interfere in what the United States Government or the State government were doing on the child labor question.

"He said, however, it was the Bureau's duty to publish all statistical information because of its bearing on general industrial conditions. Mr. Thomas added that he already had requested the Bureau's representative in Washington to collect and forward facts." (Ibid.)

Here it has been shown conclusively that if the "standards" of the Children's Bureau prevailed, "no section of this country" could allow children to work even on farms without being "blacklisted" and discussed—"together with the mandated countries and China"—until it conformed to the "international standards" of European Socialists!

Miss Jane Addams, in her book, "BREAD AND PEACE," praises the recommendations of the British Labor Party (Socialist) for "Measures for the special relief of children EVERYWHERE, without regard to the political allegiance of their parents" as "simple, adequate . . . and yet how far-reaching in their consequences!" (Bread and Peace, p. 210.)

[EDITOR'S NOTE: The following dispatch, published several weeks after the filing of our petition, shows that Miss Lathrop's "foolish pet resolutions" to standardize and internationalize children have now disgusted the Council and Secretariat of the League of Nations! Apparently there is no backing for them on earth except in the Communist International and the Feminist societies, national and international]:

LEAGUE COUNCIL SQUELCHES REPORT OF CHILD WELFARE

Julia Lathrop, American Expert, Was One of Group's Advisers.

(Washington Evening Star, June 11, 1926)

GENEVA, June 11.—Recommendations of the League of Nations Child Welfare Commission, embodying suggestions of world-wide leaders of juvenile welfare activities, have been emphatically, though quietly, squelched by the League Council.

When the report of the organization came before the Council, Sir Austen Chamberlain adjusted his monocle and proceeded in a reverberant monotone to administer a diplomatic frost to the Commissioner's effort and to rebuke the zeal of its members. The recommendations of the British

representative were accepted without a word of defense or sympathy for the commission.

This unusual pillorying of the report of one of the League's own commissions, instead of merely approving the acceptable features and passing the remainder over in silence, was due, according to a member of the League Secretariat oligarchy, to the fact that the report contained "*too many foolish recommendations,*" and that the Commission had many "*foolish advisers,*" each having a fistful of "*foolish pet resolutions.*"

Among the "foolish advisers" or experts under the title of assessors, were Miss Julia C. Lathrop, representing the American National Conference on Social Work; Judge Henri Rollet of the Children's Court of Paris, representing the International Association for Protection of Children, and a half-dozen similar leaders in child welfare work.

Our dual system of divided and limited Federal and State authority, when the balance is destroyed, becomes peculiarly oppressive—literally a double government.

The Federal Government, when it encroaches on the State governments, does not wipe out the latter. It superimposes itself upon them with the result that we have two governments on our backs to support and obey, in performing the same function.

If the standards, rules and regulations of an international agency are added—as the Children's Bureau and the Socialists desire—the American people exchange local self-government for a triple tyranny, with three governments on their backs, and three sets of bureaucrats trying to standardize children before they are born and up to the age of 18 years.

We respectfully urge that our dual system of government requires the division of administrative powers, and that neither individual liberty, local self-government nor the Federal Constitution can survive if we go on with the duplication of functions of the States by Federal Bureaus, illustrated in the most absurd and extreme form by the Maternity Act.

What can be more intimate, personal, domestic and local than the relation of mother and child? What form of tyranny, national or international, can be challenged, if this crime against common sense, this conspiracy against the Constitution, this unscientific and dangerous dictation of "social and economic" fanatics over the health of mothers and babies, is renewed and extended after its failure, its menace to the lives of mothers and infants, and its Communist nature, origin and object are all demonstrated beyond reasonable doubt?

(D) ORIGIN, TEXT AND PASSAGE OF "CHILD" LABOR AMENDMENT

The First Federal Child Labor Law, even before it was held unconstitutional, was deemed by Mrs. Kelley only as "a step towards equality for American children." And even then, she showed her determination

to secure Federal legislation eventually against *rural* child labor, despite the specific exemptions made by Congress in the Act of Sept. 1, 1916. Mrs. Kelley wrote:

"The factory children and mine children having at length caught the attention of Uncle Sam, so long blind and deaf to their need, the enormously larger number engaged in agriculture cannot forever be ignored; the inevitable logical sequel of this law is federal aid to education." (The Federal Child Labor Law, by Mrs. Florence Kelley, *Survey*, Aug. 26, 1916.)

In the same article, she again stated:

"Not until the National Child Labor Committee stationed Alexander J. McKelway in Washington . . . to promote the Federal child labor bill in Congress, did the Committee deserve its name. Henceforth, however, its task will be truly national. . . . Upon it will rest the burden, also, of extending to the *rural* wage-earning children the benefits which the present law promises to those in a limited number of industries. . . . Under the guidance of its secretary, Owen R. Lovejoy, whose patient statesmanship has achieved the success of today, the National Child Labor Committee may reasonably hope to free the Republic from the cruelty and shame of child labor."

In spite of Mrs. Kelley and of Owen R. Lovejoy, a Socialist on the National Child Labor Committee as general secretary, since 1907, that Committee with its "lingering doubts" and its legitimate other objects and non-Socialist supporters, has always lagged far behind Mrs. Kelley and the Children's Bureau in demanding national control of child labor. It has already been shown that Miss Grace Abbott was out for an *amendment* giving Congress power to "establish minimum labor standards" in February, 1920, after the Second Child Labor Law had been held unconstitutional by a Federal judge in North Carolina, May 2, 1919, and while the case was pending in the Supreme Court of the United States.

When the Supreme Court held the second Child Labor Law unconstitutional, efforts for an amendment were redoubled by Mrs. Kelley and Miss Abbott.

On the contrary, neither the American Federation of Labor, nor the National Child Labor Committee, then demanded an amendment. (See the testimony of Samuel Gompers and Owen R. Lovejoy, at the original House Judiciary Committee Hearings, June 1, 1922.) Mr. Gompers, in fact, advocated and brought in a brief about an "involuntary servitude" bill. But Mrs. Kelley insisted they would be "morons" who "learn nothing by experience" unless they backed an amendment. As usual, Mrs. Kelley's views prevailed, Mr. Gompers' "involuntary servitude" bill was discarded, and the Federation of Labor and the National Child Labor Committee were swung into line by this powerful Communist. In 1923, they, as well as ten of the "Women's Joint Congressional Committee" organizations, were all marshaled behind *Mrs. Kelley's amendment*, together with the Subcommittee of the Senate Judiciary Committee. It was Mrs. Kelley's amendment that

prevailed and was finally proposed by Congress—all the proposals of Senators Lodge, Johnson, Townsend, Walsh of Montana, and of the National Child Labor Committee, through its counsel, William Draper Lewis, being *discarded*, like the Gompers "involuntary servitude" bill, when Mrs. Kelley insisted upon "the spacious wording" of the McCormick resolution, representing the objectives of herself and the Children's Bureau.

That Mrs. Kelley was the chief draftsman of the McCormick-Foster amendment, and assumed direct leadership whenever Senators on the Subcommittee, or counsel for the National Child Labor Committee, proposed any interference with its "spacious wording," is demonstrated in the Senate Hearings, Jan. 10, 1923.

For example, Mrs. Kelley says:

"When we were laboring over the drafting of it," etc. (p. 89).

At page 49, Mrs. Kelley declares her participation in the drafting of the amendment and "in the selection of a Senator who should be asked to introduce the bill," and that she had made the adoption of that particular amendment, her "chief occupation in relation with Congress until an amendment should be adopted." (p. 49.)

Further tribute to her leadership and responsibility for the text of the amendment is revealed in part as follows:

SENATOR WALSH of Montana. "Mrs. Kelley, evidently you had something to do with drafting of this resolution. Will you tell us what idea was intended to be covered by the concluding words of the resolution; what it means?" (Senate Hearings, Jan. 10, 1923, p. 91.)

When Senators presumed to suggest constitutional complications and effects, she retorted:

"I might say that I am myself an attorney; I have been admitted to practice before the bar since 1894. I have been dealing with constitutional things under the guidance of one of our present justices of the Supreme Court for the long term of nine years, when he was advocating the constitutionality of legislation for both men and women in the matter of having their hours of work contracted. My attention has not been limited exclusively to statutes." (p. 90.)

Finally, Senator Walsh of Montana asked:

"Before you leave us, Mrs. Kelley, I understand the purport of your talk now to be that you would like to have us report this amendment exactly as it is in the McCormick resolution?"

MRS. KELLEY: "No; I am not insistent upon its being reported exactly as it is there. I am only hoping that we may not have so great a multiplicity of amendments coming in." (p. 91.)

William Draper Lewis, counsel for the National Child Labor Committee, had wanted the following amendment:

"That Congress shall have concurrent power with the several States to limit or prohibit the labor of *children*." (Ibid. p. 81.)

But Mrs. Kelley—not Miss Abbott—took the field

of leadership against that, too, objecting to the word "children," etc., in her testimony and in a subsequent letter to the Committee at page 121.

Senator Walsh of Montana declared:

"Mrs. Kelley, you would be helpful to us if you would take the draft now proposed by Professor Lewis and tell us what you feel ought to be added to it." (p. 91.)

Instead of adding to the Lewis proposal, Mrs. Kelley denounced it as "astonishing, being introduced without previous conference with the Chief of the Children's Bureau or the organizations that the National Child Labor Committee is supposed to be cooperating with," in a letter to the Committee (page 121), and William Draper Lewis himself was persuaded to abandon it. (Letter from Mr. Lewis to Senator Shortridge, page 123, Senate Hearings, Jan. 10, 1923.)

Thus the Socialist origin and control of the text of the "Child" Labor Amendment—including the elimination of any reference to "child" or "children"—is indisputable.

All the proposals that did not include the full power demanded by Mrs. Kelley and Miss Abbott were ruthlessly discarded, whether they came from Republican and Democratic Congressmen, or from Mr. Gompers or Mr. Lewis, counsel for the National Child Labor Committee.

Representative Victor Berger put it all in a nutshell when he said:

"It is a Socialist amendment, and that is why I am for it." (Congressional Record, April 29, 1924, p. 7738.)

AS TO THE SANATORIUM

With over 500 jacks under the walls and under the inside supporting columns, operated by 15 men, the Madison County Tuberculosis Sanatorium has been lifted, until at this writing, the whole building is on a level and on November 20, the institution was back to its original plane. Many of the cracks in floors and side walls have been entirely closed and when completed it is hoped that all of the evidence of subsidence will have been erased.

This has been a remarkable instance of mechanical engineering and would not have been possible, if the very best talent, available in this part of the world, had not been employed. To raise the huge building from 4 to 12 inches, with about 40 patients resting securely and undisturbed in their rooms, during the whole process, commands the admiration of every one who had knowledge of what was being done and deserves the commendation not only of the officers of the sanatorium, but also of every citizen of the county.

But for this successful effort of stabilizing this institution, it would have become a total wreck and all of the expenditure in the erection of the building would have been wasted.

The building will now remain on jacks, at a dead level, until all fear of further subsidence is passed,

when the walls and pillars will again be connected with the foundation, with re-enforced concrete.

It was worth the cost, for when the rehabilitation has been completed, we will have one of the very best institutions, for the treatment of the tuberculous, that can be found any where and will be strictly in accordance with the original plans.

—Madison County Doctor.

LEGAL ASPECTS OF PSYCHIATRY*

Your Committee on the Legal Aspects of Psychiatry made a preliminary report at the 81st annual meeting of the Association at Richmond, Virginia, on May 15, 1925. That report was printed in full in *The American Journal of Psychiatry*, Volume 5, No. 2, October, 1925, pages 306-311. Careful perusal of the report is recommended to the membership.

The committee asked for a continuation which was granted. It was decided to report in writing to the entire membership certain points of agreement and disagreement with regard to the various problems outlined in the questionnaire printed in the 1925 report. Members were then asked to indicate in writing their attitude toward the various points dealt with, mailing their comments to the committee. This enabled us to make indicated revisions in the final report, corresponding to the prevalent attitude and convictions of the majority of the members of the association. This final amended report is now respectfully submitted.

The committee felt that the problem assigned them was not merely one of what we as psychiatrists should recommend to the lawmakers in regard to bills regulating expert testimony. It seemed to us that our problem was one of reinterpreting to society the function and the objectives of the psychiatrist, particularly insofar as these concern the type of behavior which is technically and popularly regarded as criminal. The committee felt that it was exceedingly important to divert the attention of the public from the relatively minor issue of *alienistics* to the major issue of *psychiatrics*.

In the practical application of psychiatry to problems of criminal law, the prevalent concepts of tradition and long usage conflict sharply with psychiatric attitudes. Popular theories of retribution and established methods of dealing with offenders almost entirely prevented a scientific envisagement of crime until recently when psychiatrists, in spite of their original limitation of field, discovered and demonstrated that types and trends of abnormal psychology extended far out from the asylum into the court room, school and home. The psychiatrists found their experience and technique equally applicable to the irascible employee, the retarded school child, the persistent stealer, the compulsive drinker, the paranoid murderer, and the textbook cases of

*Report of committee of American Psychiatric Association, corrected June 10, 1926.

epilepsy, melancholia and schizophrenia. Face to face with the legal partitions of misbehavior into "insane" and "criminal" psychiatrists now find themselves with no technical interest in these partitions and no general agreement with them but with a driving concern in all the unpropitious trends of human character; with all acts, thoughts, emotions, instincts and adaptations, either socially or individually adverse. Some of these constitute committable "insanity," some of them do not; but all of them are psychiatric problems.

The question of responsibility is constantly being raised and the psychiatrist is frequently asked to make definite statements regarding the responsibility of a particular subject. As White and Glueck have shown, however, the conception of responsibility is exceedingly vague. In a strictly legal sense it probably means the capacity to change one's conduct in response to the direction of certain painful associations. Of course this is not the sense in which the public understands it or uses it. In the latter case it is merely an echo, the antiquated crystallization of primitive and infantile reactions known as talion law. Of course no scientist has a moment's consideration for such emotionally determined policies or mystical concepts of atonement. There was a time when even inanimate objects were held to this kind of accountability. If a man tripped over a chair and injured himself, the chair was "responsible," and must be punished by being burned or broken. Until comparatively recent times animals were held responsible for injuries they committed; they were tried and convicted and formally sentenced. But ultimately inanimate things and animals came to be exempted from the ritual of responsibility, and slowly but progressively children, idiots, and finally most of the "insane" were likewise exempted. Various curious tests than had to be decided upon to determine the "responsibility" of persons suspected of "insanity," (or an "irresponsible" "insanity"). Once they were compared in appearance and conduct with wild beasts, later with the "mentality" of a 14-year-old child. This was actually the criterion of "responsibility"! Current even today in many states is the slightly less hoary "right or wrong" test, persisting in spite of common knowledge that people are actuated by various compulsions to do things they themselves regard as wrong in the most shameful sense. Psychiatrists realize that the capacity to feel remorse does not imply power to control conduct.

The legal problem of responsibility evidently involves the philosophical problem of "free-will." Philosophy still debates the different issues of the question and science can hardly assume to give a final answer to them now. But the law stubbornly maintains that the question is closed. According to the law, all persons of certain categories possess absolute freedom of will, and all persons of other categories possess none. Neither science nor philosophy can accept such a conclusion.

The scientist then, really cannot answer as to

legal "responsibility," and he does not wish to participate in the ritual of "punishment." (Several members of the committee emphasize our professional interest in observing how it gratifies the craving of the crowd for atonement through vicarious suffering.) For his patients the psychiatrist seeks, not retributive action, but diagnosis and scientific attempt at therapy. This, in a sense, is an "inhuman" attitude, in that it is a departure from the instinctive mechanism that rules most of humanity; the clamor for vengeance is more "human." But treatment may sometimes be as painful as the sacrifice prescribed by the legal ritual. Opening a boil or setting a fracture may be painful, and the psychiatrist, too, may prescribe painful treatment, but it is never punishment (retributive).

The committee felt, therefore, that the bill covering the question of criminal responsibility was a problem upon which there was at the present time insufficient information and insufficient general agreement. Most of the members of the committee felt that the word "responsibility," as well as the word "insanity," and other similar static concepts should be eliminated entirely and endeavor made to determine rather the capabilities and incapacities of the accused, or a specification of whether or not the mental status (disease, defect, trend, etc.) of the offender was likely to lead to neglect or danger to himself or to others.

For this reason the proposal of the American Institute for Criminal Law and Criminology was not wholly approved. It was regarded as a good beginning step but it has two flaws, one of which is that it perpetuates the ambiguous and metaphysical term "responsibility"; the other is that it insists upon a particular state of mind without being able to define it. The committee has given careful attention to Sheldon Glueck's excellent book on Mental Disease and the Criminal Law and recommends it to the study of all members as a presentation of the legal status of various problems involved, without particularly favoring the author's specific recommendations for legal reform.

With regard to the burning question of expert testimony, the committee was in almost unanimous agreement that the recent Massachusetts laws offered the best practical technique so far presented. The committee is favorably impressed by both the Massachusetts and California laws. Various defects will no doubt appear; it is perhaps questionable whether sufficient examination is provided for and whether there is sufficient latitude for recommendations. Psychiatrists certainly do not wish to be limited to "Yes" or "No" reports, i. e., to specify whether or not a man should be sentenced. It is rather a question of how he should be handled, where he should be kept, or what he should be given to do. The problem of sufficient remuneration is another question involved to which the committee had no time to give. That these laws have faults is certain, but they represent an enormous step in advance, and they anticipate nearly all of

the defects and faults of the present system of expert psychiatric testimony in criminal trials. Whatever the precise legal procedure adopted, the committee felt it imperative that all judges be authorized (obliged) to request psychiatric advice, the examinations to be made conjointly, the reports to be made in writing, and the remuneration to be made from public funds.

The committee unanimously favored an attempt to codify the commitment laws of the various states. "Insanity" has come to mean nothing but certification, i. e., the desirability of enforced hospitalization. It seems quite unnecessary to have a score of different methods for determining the desirability of this step. The committee recognizes, however, the great practical difficulties in achieving this codification and has no specific ways and means to suggest.

The following suggestions were made by members of the committee in regard to possible projects for our Association in a furtherance of the aims of public education referred to above:

(1) That the American Psychiatric Association delegate a committee to publish a volume on the present status of our knowledge concerning criminality and outline a standard procedure. This committee should cooperate with the National Committee for Mental Hygiene and the American Bar Association.

(2) That there be correlated herewith the practices in foreign countries as England, France and Germany.

(3) That a survey be made of the present work of psychiatric clinics in association with courts and prisons and the results published, particularly with reference to the practical achievements of these clinics. The public knows little enough of psychiatric theories in regard to crime, but it knows even less about the medical work that is already being done in many places; hence such a study would not only afford a convenient and much needed reference for the use of social workers, legislators, judges, psychiatrists, etc., but would also serve as a basis for the dissemination of valuable educative information to an uninformed but eager public.

(4) That the American Psychiatric Association cooperate with the National Research Council, which is already considering research problems along this line and that a representative of the American Psychiatric Association be selected to function on the National Research Council.

(5) That this association should encourage uniformity of clinical statistics in prisons through contact with the American Prison Association.

(6) That there be an obligatory published review of the cases in which members of this association testify.

(7) That an annual report of cases, clinics, and of the situation in general, be presented to the American Psychiatric Association.

(8) That The Journal of the American Medical Association be assisted by the American Psychi-

atric Association in presenting to its readers a comprehensive and progressive account of psychiatry and criminology with the aim of educating the medical profession itself in psychiatric and criminologic problems.

These suggestions merit further discussion.

For the present, your committee specifically recommends the following proposals for immediate action:

(1) That the American Psychiatric Association go on record as favoring certain types of legislation such as the recent Massachusetts enactment which put the psychiatrist in a position of counselling the legal authorities as to the disposal of social offenders.

(2) That the American Psychiatric Association set up, agree upon, and publish official standard qualifications of medico-legal experts, and that it maintain a published list of such qualified experts, revised annually, for the convenience of court selection.

(3) That the American Psychiatric Association, in its annual conventions, give more attention to the problem of psychiatry as applied to crime and other behavior disorders including demonstrations of the work being done in penal and correctional institutions, behavior and child guidance clinics, and psychiatric clinics associated with criminal courts.

(4) That the American Psychiatric Association foster an attack on certain pressing problems of research in this field, particularly (a) the working out of a useful nosological classification of mental disorders which will take into consideration behavior pathology not now definitely defined or classified from a psychiatric standpoint, and (b) the analysis of the medico-legal situation in the various states of this country with particular reference to psychiatry.

(5) That the American Psychiatric Association advocate the association of a psychiatrist or a psychiatric clinic with every penal institution and with every criminal court, to act in an advisory and consulting capacity without administrative duties, and that it advocate the teaching of courses in Criminology in both law schools and medical schools by psychiatrists.

(6) That the American Psychiatric Association maintain a central bureau, either in the form of a standing committee or in the form of a full-time paid secretary, to aid in disseminating to the medical and lay public, in a dignified and accurate manner, news of the actual and potential contributions of psychiatry to present-day social life, perhaps cooperating with the National Committee for Mental Hygiene. Such a bureau should publish from time to time an official bulletin containing official statements of psychiatric attitude and opinion available to newspapers, magazines and the public at large.

(7) That the American Psychiatric Association officially accept, endorse and subscribe to the fol-

lowing statement of the present attitude of the members of this association toward the problems now under consideration and give it wide circularization.

OFFICIAL STATEMENT OF POSITION

WE BELIEVE—

1. THAT the psychiatrist's chief concern is with the understanding and evaluating of the social and individual factors entering into failures in human life adaptations.

2. THAT crime is a designation for one group of such adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding, of course, certain other branches of science.

3. THAT crime as well as other behavior and characterologic aberrancies can be scientifically studied, interpreted and controlled.

4. THAT this study includes a consideration of the hereditary, physical, chemical, biological, social and psychological factors entering into the personality concerned throughout his life as well as (merely) in the specific "criminal" situation.

5. THAT from a study of such data we are enabled in many cases to direct an attack upon one or more of the factors found to be active in a specific case to effect an alteration of the behavior in a propitious direction; while in other cases where this is not possible we are able in the light of past experience and discovered laws to foresee the probabilities to a degree sufficient to make possible proper provision against subsequent (further) injuries to society. By the same experience and laws we are enabled in still other cases to detect and endeavor to prevent the development of potential criminality.

6. THAT these studies can be made with proficiency only by those properly qualified, i. e., scientists who have made it their life interest and study to understand and treat behavior disorders.

7. THAT this point of view requires certain radical changes in legal procedure and legislative enactment, insuring the following provisions:

(a) The court appointment, from a qualified list, of the psychiatrists testifying in regard to the mental status, mechanisms, or capabilities of a prisoner; with opportunity for thorough psychiatric examination using such aids as psychiatrists customarily use in practice, clinics, hospitals, etc.; with obligatory written reports, and remuneration from public funds.

(b) The elimination of the use of the hypothetical question and the terms "insane" and "insanity," "lunacy," etc.

(c) The exemption of the psychiatrist from the necessity of pronouncing upon intangible concepts of religious and legal tradition in which he has no interest, concern or experience, such as "responsibility," "punishment" and "justice."

(d) The development of machinery adequate to the requirements of the psychiatric point of view in criminal trials and hearings, including court clinics

and psychiatrists, and ultimately a routine compulsory psychiatric examination of all offenders with latitude and authority in the recommendations made to the court as to the disposition and treatment of the prisoner.

8. THAT this also entails certain radical changes in penal practice, including:

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(b) The release of prisoners upon parole or discharge only after complete and competent psychiatric examination with findings favorable for successful rehabilitation, to which end the desirability of resident psychiatrists in all penal institutions is obvious.

(c) The permanent legal detention of the incurably inadequate, incompetent, and antisocial, irrespective of the particular offense committed.

(d) The development of the assets of this permanently custodial group to the point of maximum usefulness within the prison milieu, industrializing those amenable to supervised employment, and applying their legitimate earnings to the reimbursement of the state for their care and maintenance, to the support of their dependent relatives, and to the reimbursement of the parties injured by their criminal activities.

9. THAT effective preventive medicine is applicable in the field of psychiatry in the form of mental health conferences and examinations, child guidance clinics, mental hygiene clinics, lectures and literature, and similar institutions and efforts.

10. THAT the protection outlined provide an efficient and scientific solution to the problems of crime, viz.:

(a) The protection of society.

(b) The rehabilitation of the "criminal" if possible.

(c) His safe and useful disposition or detention if rehabilitation is impossible.

(d) The detection and the prevention or deflection of the development of criminality in those potentially predisposed.

Respectfully submitted,

ADLER	LOWREY
BRIGGS	SALMON
GLUECK	WILLIAMS
HEALY	WHITE
JELLIFFE	MENNINGER
KIEB	

SHORT STORY WRITER

The professor was giving his pupils some pointers on short-story writing.

"To be successful," he said, "the short story should have a touch of reverence, some reference to royalty and just a little touch of the risqué. See if you can write a little something for me tomorrow which will cover these points."

The next day, the budding author handed in the following: "My God!" said the countess, "take your hand off my knee!"

Original Articles

SPONDYLITIS OF UNKNOWN ETIOLOGY SIMULATING TYPHOID SPINE*

S. C. WOLDENBERG, B. Sc., M. D.

CHICAGO

Attention was called to spinal rigidities by Virchow in 1867, who divided such cases into groups which he called (*a*) arthritis deformans and (*b*) osteo-arthritis. He called those types in which there is bone-formation between the vertebrae with a loss of inter-articular tissue and intervertebral substance *arthritis deformans*; while those types in which the joint ligaments were ossified he named *osteo-arthritis*. This classification was undisputed until Bechterew, in 1892, described several cases of spinal rigidity which he considered an entity. We have made a search of the medical literature for reference covering the matter here presented, but apparently up to this date no other cases have been reported. From a study made of a series of so-called spine-cases after very careful histories and thorough clinical and x-ray examinations, infections of teeth and tonsils, gonorrheal infections and previous typhoid, as far as possible, were ruled out. Clinically and roentgenologically, striking joint-changes are apparent in this group which elicit surprise when they are compared with other joint-lesions of known etiology and pathology.

This paper is based on twenty-two hundred and seventy spinal examinations of men whose cases have been carefully studied during the past twenty-eight months, of which one hundred and sixty-seven cases have been selected. In each one the history points to the onset of the malady as dating back approximately, for a period of six to seven years. The patients are all between the ages of twenty-two to thirty years of age.

The symptoms described by the patients were as follows:

General Subjective Symptoms: A dull aching pain in the back, inability to lie down without great discomfort, pain more marked upon exertion, but very little pain upon walking. The pain does not disappear when lying down. It is increased by long sitting or standing. It may be localized to a joint such as the sacro-iliac or hip joint or referred to the posterior portion of the

leg or the anterior portion of the foot. The onset is gradual and the disease slowly increases during a period of from eight to twelve months when it causes marked discomfort in climbing stairs or when rising from a sitting posture. This discomfort is much increased and is usually very painful when the patient has to sit on a hard-bottom chair.

Objective Symptoms: The patients are usually inclined to stand in a stooped position with knees slightly flexed, but some of them present features of a "poker back," and in others there is seen an abnormal straightening of the lower back indicating a condition of flat spine in which the normal curve is obliterated, the usual lordosis being absent. The spine is usually held very rigid, the hands being frequently used for support when rising. There is at times a marked atrophy of the muscles of the buttocks; pain is increased by attempting or performing motions of the spine or sacro-iliac joints, also by applying pressure in the region of the great sciatic nerve. There is also a definite limitation of the motion of the spine. The cervical region has the greatest range of motion, especially in forward and backward bending; the dorsal region has less motion than normal while the motions become limited in the lumbar articulations. There is marked spasticity of the muscles of the lower back, forward and backward and lateral motions all being decreased. Limitation of forward motion in the lumbo-sacral region is most common. Backward motion is impossible and when the patient attempts to do this it is accompanied by intense pain. The lordosis is invariably absent. Marked kyphosis or lateral curvatures were not observed in any of the patients in this group. There is at times local tenderness when palpating in the region of the lower spine or sacro-iliac joints. Hyper-extension and rotation of the pelvis is usually absent, but may be possible in some cases. Straight-leg raising is limited and the patient is unable to lie prone. Slight psoas contraction was found in some of these cases. It is observed that as the disease progresses, the pain and local tenderness decreases.

Roentgenological Features: The x-ray manifestations of the condition under discussion represent gross intrinsic changes. Obviously, intimate or microscopical changes cannot be demonstrated by the x-ray plate regardless of wealth of shadow detail or excellency of stere-

*Read before the Section on Surgery, Illinois State Medical Society, May 19, 1926.

oscopic effect. The gross changes which we refer to are found to have occurred in the series of cases here represented and are definitely established. They may be divided into three groups, in accordance with the particular type of joint-change.

These are:

Group 1. Cases in which a single joint of the dorsal or lumbar spine is involved.

Group 2. Those cases in which more than one joint of the spine (dorsal or lumbar or both) is involved.

Group 3. Sacro-iliac involvement, sometimes unilateral but most often bilateral, with or without association with Groups 1 or 2.

These may further be considered from the angle of the character of the joint-change of which there are two types, destructive and constructive and a third type which is a combination of both.

In all cases the x-ray features indicate a very low-grade type of infection, but a different stage of activity can be deduced in most instances. For practical purposes a division can be made into two classes, of which one is active or slowly progressive and the other is inactive (healed).

A study of the individual cases in which these joint-changes have occurred as indicated by the abnormal shadows, reveals extraordinary joint-alteration, particularly in view of the comparatively youthful age of the class of patients that make up the series under consideration. In certain instances, the most marked x-ray changes were found in individuals in the early twenties. In all cases presented in this series, trauma can be ruled out, at least a trauma of sufficient degree to cause a rearrangement of the cancellous and cortical architecture of an individual bone or crushing of the intervertebral disc.

Changes in Spinal Joints: The earliest shadow change represents a slight degree of joint-involvement and is recognized by a comparative decrease in the normal intervertebral space with slightly hazy shadows (or lack of sharpness) of the opposing articular surfaces. This slight fuzziness at the involved joint is in contrast to the other (normal) articular edges of the same bone. Another manifestation is seen in cases in which the interarticular facets are found to show this same type of articular surface-change. Obviously this latter condition is more difficult to discover (roentgenologically) and therefore is

frequently overlooked, inasmuch as these articulations are small in area and the supporting bony portion is of less bulk than the vertebral bodies.

Lying as they do behind the relatively large bone-mass of the articular facets, it requires very careful stereoscopic analysis to dissect, as it were, the two shadows. In the cases of intervertebral cartilage-involvement when the lesion has undergone further degenerative progress, there is seen an accentuation of the decrease of the joint-space which is less evident in earlier stages. The two opposing surfaces now approach each other and the joint-involvement is more easily demonstrated by the altered shadows. An advanced case will reveal a total obliteration of the joint, a synarthrosis resulting and the two contiguous bony bodies fuse into a single bone. In certain of the cases a reparative process is conclusively established by shadows which represent a distinct hypertrophy of bone in the soft tissues immediately around the involved joint. This increased bone seemingly attempts an immobilization of the involved joint by an auto-splinting as it were. At times the shadow characteristics are quite similar to those found in the Marie-Strumple type of spondylitis. In fact, the x-ray aspects of the condition being reported can seldom be differentiated from ordinary low-grade inflammatory spondylitis found to occur in focal infections, (particularly the early stages of the condition) except that a more localized involvement is found in these cases. This seems to the essayist to be *bone fide* evidence that we are dealing with an inflammatory process of low-grade, but the x-ray does not establish a specific cause so far as the investigation reveals no particular micro-organism, toxin or irritative material has been found.

As every effect has a cause, we seek to determine the reason for the joint-changes here described, and presumptive evidence in this particular group points to some infecting focus, the nature of which, after careful study, we have so far been unable to determine. This condition occurs with about equal frequency in the dorsal and lumbar spine regions. An angulation of the spine in lateral direction is seldom seen to accompany the lesion, the process being that of a more or less even involvement of the intervertebral cartilage and an even invasion of the bone underlying the articular surfaces. There is occasionally a slight degree of kyphosis if one

articular intervertebral joint is involved, but this is not a usual feature. The alteration is probably due to intrinsic bone-change in which a more or less degree of softening of the bone-tissue occurs and as the anterior portion of a vertebral joint has but a slight degree of support, due to its peculiar anatomy, a partial settling takes place which is greatest at the anterior portion, thus resulting in a partial kyphosis, which, however, is not easily recognized.

The x-ray manifestations of this condition as seen in the cases of sacro-iliac joint-involvement are of like nature as just described, but in view of the different anatomical outline with regard to x-ray projection, the condition is less readily recognized. We find the condition to be bilateral in the greater percentage of cases. The changes are essentially the same as occur in the spinal joints. There is a loss of the sharply defined shadows of normal articular edges, haziness of joint-outline, decrease in the amount of inter-articular structures, followed later by evidence of erosion of articular surfaces and a consequent joint-oblivation with fixation of the sacrum with both pelvic bones, thus forming a rigid pelvis. All these features are well established by the x-ray shadows. An early stage of the condition presents the same x-ray features as does a low grade inflammatory joint-change. In all of the sacro-iliac type of this series studied, there is little or no evidence of hypertrophic bone-changes.

In the final stage, the hazy detail of the articular surfaces seen in the earlier stages of activity are replaced by clear cut, sharply defined shadows of fused bone, which usually represents a healed condition of a formerly inflamed joint in which a loss of cartilage took place.

Differential X-ray Diagnosis:

1. Typhoid
2. Chronic Hypertrophic Osteoarthritis
3. Tuberculosis.

The shadow found in the so-called typhoid spine present no essential differences from those observed in this series of cases. There is the same joint-destruction and disappearance of inter-articular cartilage and at times a reparative process around the joint. The pathology and x-ray findings would suggest that these conditions may have been caused by some intestinal infection, either a mild typhoid or para-typhoid

or some other gastro-intestinal infection, which caused insufficient symptoms to require hospitalization of the patient. Since typhoid spine results after the disease has run its course it may be presumed that the original cause of the condition under discussion has occurred and entirely disappeared for some months or years previous to the vertebral changes.

In cases of chronic hypertrophic osteoarthritis there is none of the evidence of destruction of the internal joint-tissues; it is essentially a matter of bone-tissue increase at the edges of the articular surfaces. It is only in the extreme type of the condition, namely, arthritis deformans, that the articular surfaces present such change; even then the alteration is not that of an eroded articular surface, as is the case in the typhoid arthrosis. Then, too, the chronic hypertrophic osteo-arthritic changes occur in many joints simultaneously though not always of the same degree, whereas, in the condition under discussion it involves but one or at most a very few joints. Chronic arthritis seldom is found in individuals under thirty-five to forty-five years, while these cases are in individuals between twenty and thirty years of age.

Tuberculous spondylitis or tuberculous sacro-iliac arthritis presents shadow features which differ from those here presented in the fact that there is little or no softening of the cancellous bone-tissue of the vertebral bodies, as is characteristic of tuberculous lesion. There is also an absence of the usual knuckle of definite hypophysis. The amount of bone destruction under the articular surface is very small as compared with the caries usual in tuberculosis.

Summary: During the study of a large number of spine cases, it was found that a certain percentage showed a peculiar type of spondylitis.

The clinical symptoms are recorded as a dull aching pain, inability to lie down without great discomfort, marked rigidity of the muscles of the back, atrophy of the spinal muscles, difficulty in lying prone, obliteration of the normal lumbar-curve, and marked limitation of all motions of the spine.

The x-ray findings are distinct erosion or alteration of the articular surfaces and decrease in the joint-space, (sometimes reaching the stage of a total obliteration with resulting ankylosis.) The clinical symptoms and roentgenological findings are evidence of a low-grade inflammatory

process of one or more spinal joints. There is no essential difference between this condition and the true typhoid spine. Since none of the patients gave a history of having had typhoid fever and definite etiology cannot be proven it is difficult to explain the cause, but the changes are those of a low-grade infection. The possibility of a connection between typhoid inoculations which were given in all of these cases and the joint-changes here described has been considered, but no evidence of sufficient positiveness has been produced to establish this as a cause.

On account of its roentgenological importance, emphasis must be laid upon the fact that these joint-changes have occurred in the spine in patients who never had typhoid fever, which clinically and roentgenologically are identical with typhoid spine.

30 N. Michigan Avenue.

DISCUSSION

Dr. B. C. Cushway, Chicago: Dr. Woldenberg has brought up an apparently new subject or described an apparently new condition of the spine. I would just like to call attention to the nomenclature we have at present describing these lesions involving the spine. The nomenclature is very loose. We use the terms spondylitis, osteoarthritis, hypertrophic arthritis, arthritis deformans and really when we come to subdivide the conditions the term used does not really mean any especial type of lesion. The arthritis deformans type of spinal lesion has been divided into the "Bechterew" type of arthritis deformans localized to the spine, the "Marie-Strumpell" type involving the hip and shoulder which is the most acute type, accompanied by considerable pain and symptomatic signs. The type of arthritis just described by Dr. Woldenberg presents nothing different from a differential standpoint as far as I can see. The type of pathology he describes might very well be a very early arthritis deformans. Arthritis deformans as you know usually begins first with the lower lumbar vertebrae and rather progressively spreads upward, involving the upper lumbar and dorsal vertebrae. The type of pathology, the amount of involvement, the involvement of articular surfaces, the production of bone around the margins of the vertebrae, in the intervertebral spaces and in the disks would be just as you might find it in what is commonly called arthritis deformans. The fact that these cases have been subjected to vaccine inoculation for the prevention of typhoid is a very important feature. It seems to me, that perhaps this paper might stimulate considerable research work, perhaps to see if there is any reason typhoid vaccine should cause the condition and also see if perhaps we might be able to separate the changes caused by such a condition and whether these might be differentiated and recognized by means of the x-ray.

In using the terms arthritis another illustration of the loose nomenclature we have at the present time, we know that the term arthritis specifically applied should be used to imply an inflammatory process involving the joint surface. As we use it applied to the spine we know there is no joint surface in the spaces between the intervertebral disks, that the only true articular surfaces of the spine are the articular processes and their articular surface is very small. Another peculiar thing is that we examine radiographs and very seldom do we find the pathologic process involving the joint surface. That point makes it very difficult to classify our nomenclature. It also makes it difficult to pick out true arthritis from other conditions that are more commonly called arthritis. I would like to see this work continued and verified and if there is such a condition as Dr. Woldenberg brought out, I would like to see it recognized.

Dr. F. P. Hammond, Chicago: I was thinking when Dr. Woldenberg was giving this paper how much patience it has taken and how much hard work he has done on obscure back cases. How frequently do we see a back case with practically no objective signs and when we fail to make a diagnosis the patient goes to some one else. It seems to me Dr. Woldenberg has presented a study that is worth while. The condition is obscure and apparently has few objective signs. It takes a man with some imagination and a lot of patience to find a difference objectively between the spinal muscles of one side to the other. I admit it is a matter which we might have a difference of opinion on. I compliment him and hope he will continue his research on obscure back cases and that other men will work along the same line to determine whether it is hypertrophic osteoarthritis or arthritis due to some other form of infection. I think there is one thing fixed in most of our minds, that this is a metastatic arthritis. It seems to me that a condition that will cause the intervertebral disks to grow stiff must be due to infection coming from some other part. I think this paper will increase my interest in back cases from now on.

Dr. S. C. Woldenberg, Chicago (closing the discussion): I wish to thank everybody who was patient enough to listen to my paper. I have not brought out in this paper something that was secret as far as our work is concerned. I did not want to be quoted, that more soldiers died of typhoid inoculation than from wounds. However, all these cases had received six to nine typhoid inoculations. These six to nine inoculations extended over a period not later than the first five months of the war in 1917. If you will look up the Surgeon-General's records, which you can get at the Surgeon-General's Library, Washington, D. C., you will find that the orders had been amended as far as typhoid inoculations were concerned at different intervals and became more standardized about September, 1917.

In these cases all the other joints were absolutely normal, whereas in arthritis deformans, as Dr. Cushway brought out, you invariably get a joint involvement of other joints besides the spine.

THE WEEKLY CLINICAL CONFERENCE

G. HENRY MUNDT, M. D., F. A. C. S.

CHICAGO

It seems a paradox that when a physician leaves the medical school or hospital internship he leaves behind him the clinical study of cases with his fellows and suddenly becomes an individual and with the majority of us the opportunity for intimate medical contact is never re-established. This feature of the subject presents such a long train of thought that from it alone the proposition I wish to urge could be easily justified. Doubtless every medical practitioner would say that he could gain very greatly from the scientific standpoint if he were a part of a going clinical conference. While this feature is of great importance it is not the cause of my desire to have the Illinois State Medical Society foster the establishment of these conferences in the hospitals of the state of Illinois.

Physicians are conspicuously weak in two features, viz:

1. They rarely present a solid front on any question.
2. They are of all educated men least capable of getting on their feet and saying what they think.

FAILURE TO PRESENT A SOLID FRONT

Probably the reason we are unable to secure the legislation which organized medicine has wanted for many years is to an extent our failure to present a unanimity of purpose to legislators and the general public. When one analyzes this conspicuous characteristic of physicians he must in the end justify the fact (and it is a fact) on one of two reasons, viz:

1. There is no definite general opinion among physicians on any outstanding question or,
2. Medicine is not so organized to formulate and present its opinion.

It is safe to say that a very large proportion of the members of organized medicine have the same opinion on every outstanding medical question at least they would have if they knew the facts and thought about them. There is no royal road to make men think but closer contact would acquaint us with the important facts and would at least give the basis for an opinion and would probably direct that opinion.

When I say that medicine is not so organized to formulate and present its opinion I have no thought that we need more medical societies; there probably is not one too many, but it is my idea that one more than we have at present would be too many.

The basic medical societies (County medical society, State Medical Society, and American Medical Association) must be the clearing house for all opinions and activities of medical men and from this source should come all contact with the public. If this is true and I thoroughly believe it is then every effort should be made to improve the county medical society. This is the basic reason for my desire to see weekly clinical conferences established all over this state.

The weekly get together is to be in no way a political talk fest, in fact this feature should be far in the background, the entire idea being progress in scientific medicine. The other features will all come out because of the frequent interchange of ideas and a better understanding of the other physician's abilities and ideas.

This weekly conference is not to replace (never can and must not) the meetings of the county or branch society. Neither is it to be confused with the staff meetings which are so essential and the time set aside for this weekly conference should not be broken into for other than real medical questions. Another reason why it should not be confused with the staff meeting is that it should be open to all reputable practitioners, by this feature it will have a fine influence on practice in a community.

POOR TALKERS

Medical men are notoriously poor talkers and why should any one expect them not to be. Ours is very largely an occupation of personal contact and gives very little opportunity to develop the ability to stand up and speak, much less to stand up, think and speak. We are poor thinkers on our feet because of the lack of practice. If the proposition I am urging were established all over this state and every physician would enter into the spirit of the thing, and do his share, in a very few years we would be able to out think and out talk our legal friends and I think even the clergy would need to polish up to meet us. I have no hope of reaching this Utopia because medicine has always been and always will be a body of doers rather than talkers and I want them to

remain so, also it will not be practical to put this in use every place.

There are in this state a few county societies where the programs are always presented by outside men. This certainly is not the way to develop the physicians in a community, and I have urged some county secretaries to change this but some of them have said that their members will not attend a meeting where local men present the program. If the conference is established, in a few months it will be found that there are men in every locality who can present a subject in such a manner that it will draw a crowd, and as a by-product it will be found that the members will attend because of loyalty to the speaker. If the urge for an authority is very great use him to open the discussion but for the welfare of the future of medicine don't keep local men off the programs, in fact urge or force them on. The only justification for a medical organization is what we can get out of it and what we get will be in direct ratio to what we put in. I say with no equivocation that the county society which excludes its members from its programs and uses only outside men is making poor use of its opportunity to develop the individual members. Personal observation has demonstrated to me that where only outside men present the programs there is apt to be little discussion while in the other kind of society, discussion is very liable to be an important feature of the program.

A CLINICAL CONFERENCE

My optimism regarding the value of this is based on the observation of a weekly clinical conference which was established in the Evangelical Hospital (German Deaconess Hospital) and is now in its fourth year. This hospital is not a teaching hospital in the usual acceptance of the term and some observations regarding this clinic will probably be the best way to present the good features of it and so far as I have been able to see there are no bad features.

1. We meet Saturday mornings at eight o'clock and close at nine o'clock. This hour is before most men are in the office and for that reason there is only one thing to give up and that is their bed and year after year more men are willing and anxious to be on time.

I strongly advocate that these meetings be held once a week, because then no one can have the excuse of not knowing when the meeting is

held, also if interest is to be sustained it can't be at a much longer interval.

2. For the first three years there was a clinic chairman and secretary whose job it was to secure men to present the programs for the next week. This year one staff man and one associate staff man are assigned to conduct the work on a certain day. This means that without any order at all a list was posted assigning two men for each Saturday and to this time there has been no failure to have a well prepared program presented. By this system the few men who were a little hesitant in previous years are coerced into getting the benefit they should, also thus they do their share of the work. The first of the week the program for the following Saturday is posted thus giving an opportunity to prepare for discussion if desired.

3. During the four years only three programs have been presented by men not working in the hospital, two of these by dental specialists and one by a specialist not represented on our staff. This is the feature above all to be kept in mind.

4. The average attendance for last year was thirty-seven physicians which demonstrates that it must be of value to get that many men out at eight o'clock regularly.

5. What is to be presented? Formal papers should not be read. The proper thing is the presentation of histories, laboratory, clinical and roentgen findings and if needed the patient should be shown. The patient is at times important, but often presents little to add to the interest of the meeting. In conversation with many men I have learned that very infrequently does a patient refuse to be presented, in fact it is my personal observation that they rather like the notion of having their doctor show and discuss them before a body of medical men.

The common things are apt to be more interesting than the rare case, so because a condition is common justifies its presentation and discussion. This point is made because many of us probably feel that we have no case which can possibly be of interest to other physicians.

Before preparing this paper I asked Dr. J. Wm. Davis to make some notes on the value of a clinical conference. I have incorporated in this paper all except one of the points brought out by him in his notes, because I like the way he said this one thing I will copy it verbatim:

"A clinical conference in which every mem-

ber takes his full part will eventually lead to the following:

"The man who formerly sat back and let the other fellow do all the talking thereby running the risk of developing an 'inferiority complex' will now state his opinion on the things of which he is informed. He will find that he is listened to quite as attentively as is anyone else in the group, and he will come to have a more abiding faith in his own opinions and in himself.

"The aggressive man who always calls attention to himself through his readiness to offer an opinion on all subjects thereby running a chance of developing an exaggerated opinion of himself is saved from this catastrophe, because the men in the above group now do their full share of the talking.

"The result in both instances will be most excellent as a mental hygiene measure."

There is nothing new in anything I have said here but if it will stimulate some thought among the physicians it will serve its purpose. However, I am anxious to see a few of these conferences established in the hospitals in Illinois.

It will be difficult to carry an idea of this kind to fruition where there is no hospital.

To determine what the attitude of other men in the Illinois State Medical Society was on this subject I have asked the officers and have not received an unfavorable opinion. I have received favorable comment from,

Dr. Mather Pfeifferberger, President.

Dr. Harold Camp, Secretary.

Dr. D. B. Penniman, Councilor 1st District.

Dr. S. E. Munson, Councilor 5th District.

Dr. S. H. Neece, Councilor 7th District.

Dr. Cleaves Bennett, Councilor 8th District.

Dr. Wm. D. Chapman, Chairman of the Council.

Dr. Jas. H. Hutton, Chairman Scientific Service Committee.

Miss C. B. Keller, Director Lay Education Committee.

There is some question of the practicability of this in the mind of Dr. E. E. Perisho, Councilor of the 2nd district.

In closing let me ask earnest consideration of this subject by the physicians with hospital connections.

If I can be of assistance in establishing this work it will be a pleasure and I invite correspondence.

SELLING THE SOCIETY TO THE MEMBERSHIP AND TO PROSPECTS*

H. M. CAMP, M. D.

Secretary Illinois State Medical Society

MONMOUTH, ILL.

Good salesmanship depends largely on three factors:

1. Having a good article to sell.
2. Having the ability to sell it.
3. Having confidence in the proposition.

There is no reason in this age, why we cannot justifiably incorporate sound business principles to convince the medical profession that in the Illinois State Medical Society we do have a real proposition and that it is decidedly to their advantage to affiliate with us in perpetuating the organization.

We should also be able to convince them that there is no substitute as good and, in fact, that there is no second best when it is a question of benefits.

We have in Illinois no less than three thousand prospects who are eligible to membership in our Society and who are not now on the membership roll.

Before starting out on our selling campaign, it is essential that we first sell the membership and educate ourselves as to what we really have to offer. This, too, will enable us to answer the queries that we so often hear as to the benefits gained through membership.

We should realize that all forms of organizations, whether civil, legislative, executive or otherwise are really products of evolution. Wells, in his "Outline of History" tells of the chaotic condition which existed in this world before the people got together to systematize their work and activities; what confusion, overlapping and unnecessary repetitions they had. From this there gradually developed a system whereby the work was divided equally and the benefits were also distributed to all.

We will briefly review our own organization, beginning with the real basic unit of medical organization, namely, the County Medical Society, then the State Society of which it is a component part and finally the American Medical Association which is a federacy of the various State Societies.

If the County Society is right, the others must

*Read before the Madison County Medical Society, Nov. 5, 1926.

also be right for the County Societies are in reality the American Medical Association.

The purposes of the Illinois State Medical Society are best stated in the preamble to the constitution written in 1850 and which can hardly be improved.

Those sturdy pioneers in medicine were not satisfied with medical knowledge, medical education and the fellowship which all members of the profession should enjoy, so in 1850 twelve of them met in Springfield and organized the Illinois State Medical Society.

On analyzing this preamble to the Constitution, we find six individual purposes of organization.

1. To cultivate and advance medical knowledge.
2. To elevate the standard of medical education.
3. To promote the usefulness, honor and interest of the medical profession.
4. To enlighten the public as to the duties, responsibilities and requirements of medical men.
5. To excite and encourage emulation and concert of action in the profession.
6. To facilitate and foster friendly intercourse between those engaged in the practice of medicine.

When we contrast medical knowledge, education and practice of that date with our present practice we can readily see that many of the purposes have been realized through this organization.

The County Medical Society should be a recognized factor in each County for the health interests of the community. It is quite obvious that if every physician eligible to membership were enrolled on the list of members, it could do more for the community and receive a more respectful recognition by laymen.

The privilege of fellowship is one of the benefits gained through membership. Being entitled to attend the meetings, participate in the discussion and knowing that you are a part of the Society itself is well worth the cost.

It is the duty of every medical man and woman to do their bit. We may not all be good speakers or able to write a scientific authoritative paper on some phase of medical or surgical work, but each practitioner has gained something through his years of experience that will be of benefit to the other members and the County

Medical Society is the logical place to give this information which may benefit others in handling the same proposition in the future. Society members are better practitioners through this association. They are better taught the necessity of keeping accurate records of their work which not only benefit them, but also act as a memorial to their work after they are gone.

Through the different attitude of the laity toward the medical profession today, medical society membership is a necessity to the man in practice as never before.

Membership in the County Society also gives membership in the State Society. It has been our privilege during the past three years to give a careful study to the functions of the various State Societies throughout the country. We do not believe that any State Society is doing more for its membership nor more for the citizens of the state than the Illinois State Medical Society at this time.

The ILLINOIS MEDICAL JOURNAL to which each member is entitled without additional cost is recognized as one of the foremost medical publications. The editorials are carefully prepared and are well worth the time necessary to read them carefully. The original articles contained in each issue are of unquestionable benefit to all who read them and are frequently referred to in bibliographies.

Each county society is privileged to send in a brief report of their meetings, although many do not avail themselves of this opportunity. The medico-legal protection afforded the membership alone is worth more than we pay annually as membership dues. Through the organization we have, the number of malpractice suits filed against our members are gradually diminishing.

The legislative service has likewise improved from year to year until now we realize that we have a highly efficient organization which adequately protects our interests. The attitude of the members of the legislature toward our type of service can best be determined by interviewing any Senator and Representative. No lobbying is necessary, and this appeals to our legislators who are so often called on to hear the appeals of the many groups of "lobbyists" who impose on their time at each session.

The lay-education service is rapidly becoming an important factor in the improvement of health conditions in Illinois and also has been a

potent factor in co-ordinating the many overlapping types of health service given by various organizations throughout the state. It is now generally recognized that the medical profession should supervise all health activities. Our Dental brethren are recognized as being a part of the medical profession, — specialists similar to the other specialties practiced by members of our Society. The State Department of Health has been co-operating with our Society and has repeatedly assured us that their functions are the control of communicable diseases, preventive medicine and not curative measures. The State Department does not intend to practice medicine in any form.

The work of the Lay Education Committee is no longer experimental and it has proven to be a real necessity. The five basic principles or aims of the committee have been carefully outlined, and positive results have been obtained. These aims are:

1. To teach the meaning and necessity of the single standard of medical education.
2. To teach preventive medicine toward which we believe the periodic health examination, medical and dental, is the single greatest step.
3. To achieve a high degree of efficient teamwork in health programs with all agencies interested in any phase of health work.
4. To establish in community activities, scientific medical leadership of all lay movements for health.
5. To hold back in every way possible State Medicine in every form and prevent all legislation toward that end—this being done through the component Societies assuming the community responsibilities for public health.

Many speakers have been sent out on request to talk before lay audiences each telling the particular story in lay terms, avoiding confusing scientific terms. In many of these communities where talks have been made, we have had reports on the reactions, which have been encouraging and have proven to us that they do get results.

Newspaper service is available to those communities requesting them, the material being carefully edited and censored before it is sent out. There are at this time more than 90 newspapers in Illinois publishing this health news and it is hoped that more counties will avail themselves of this service during the next year. All such service is given under the supervision

and signature of the County Society. Many health talks over the radio have been given and this has proven to be a popular service.

The question of periodic health examinations has gone over rather slowly. At this time it seems that the most important thing to do is to "sell" the proposition first to the members of the Society and then use every effort to tell laymen the necessity of the annual health inventory, contrasting it with the annual business and financial inventories that everyone approves.

There are at this time in Illinois about 70 counties where there is an excellent degree of co-operation with lay-organizations interested in health work, a fair degree in about 20 and practically none in the other twelve counties. A thorough co-operation on the part of all of the Societies for the furtherance of this plan will make it 100% in the near future. When we consider the co-operation proposition we should not forget the fact that we should thoroughly co-operate with our Dental friends, the State Health Department, the Nurses Association and other organizations interested in the many phases of preventive medicine.

A recent function of our Society was the establishment of the Scientific Service Committee which was established solely for the benefit of the County Society Membership. Under the leadership of the chairman, Dr. J. H. Hutton, the committee has a list of subjects available for county society meetings covering the practice of medicine, surgery and its specialties. Speakers can be sent to the societies to give this type of post-graduate service and I would suggest that anyone interested in the proposition should write to Dr. Hutton and get more information. During the past few months the Society has been interested in the pre-school child examination. It is very evident that the proper time to discover developmental defects, organic or functional troubles in children is during the period before they enter school and obviously more can be done then to relieve these troubles than later in life. Every county society should co-operate in such a movement at this time. Every member of a county medical society is likewise a member of the American Medical Association and eligible to active Fellowship. To become a Fellow of the American Medical Association, he should make a formal application, showing that he is a member in good standing of his county and state

society and send five dollars, the annual membership dues, which also entitles him to the *Journal of the American Medical Association*.

It is quite obvious that the County Medical Society is in reality the American Medical Association. This great Association to which every County Society member is eligible to fellowship has a number of departments all of which are working for a common interest, that of its members and fellows.

I would suggest that every member find out for himself, either by visiting the American Medical Association headquarters in Chicago or by writing to the Association, what the Council on Pharmacy and Chemistry is doing—the functions of the Bureau of Investigation, Bureau of Legal Medicine and Legislation and the various other departments. Learn about the library and the packets which are sent to all Fellows on request by the payment of a small fee barely sufficient to pay postage and covering any subject desired. After this is done you will have a fairly good idea of what Fellowship in the Association really means.

In addition to the many things herein enumerated, what has been accomplished through medical organization?

It is self-evident that we have today better facilities for medical education and better trained practitioners than ever before.

We have ample provisions for specialization and post-graduate work. The public is rapidly being educated relative to the importance of health considerations. The attitude of the laity toward the medical man and his work has changed materially. We have had established for us a code of ethics which has made us more thorough and conscientious. Laws have been passed in our state to regulate and standardize medical practice and which protect us in our work.

The profession in America is not burdened with State Medicine, paternalistic ideas or other similar movements such as our confreres in Europe have.

We have a decidedly increased incentive to continue our studies throughout our professional life and not feel that our education is completed when we receive our medical diploma, and license to practice.

Why then, do not all practitioners in our coun-

ties who are eligible but non-members affiliate with the local society?

This seems to me a problem for the County Society itself to solve. Invite the non-members to the meetings. Show them what you are doing for yourselves and the community.

Every county society should have a membership committee, and have at least one member interview each eligible physician who is not a member.

Have regular meetings with carefully arranged programs. In addition to the regular scientific programs, special meetings can be arranged which will add to the interest of all. A periodic health meeting with a demonstration of a thorough physical examination is always interesting. If the local society does not care to furnish the speaker for the occasion, the Scientific Service Committee will gladly assist in the selection and send one to give the demonstration.

An excellent subject for an interesting meeting is the preclinical signs of disease. This can be presented by several members each taking a subject such as the pre-clinical signs of cancer, tuberculosis, cardio-renal or other disease.

An interesting meeting would be a joint meeting with the dentists to consider the relations of the two professions.

Let us at this time briefly describe the ideal county society organization. It should have a good membership in proportion to the number of eligible practitioners, should have relatively frequent meetings with a good average attendance, good programs at each meeting which will be of interest to all the membership, should be recognized as a factor for good in the community and be properly organized so that all health matters for discussion in the community and everything for the betterment of health conditions be done under their own supervision.

At the same time the society must realize its responsibility to the parent organizations, of which it is a component part.

A county society does not need to be large to be a good society, for frequently some of the larger societies are not nearly so good as many of the smaller ones.

It has often been stated that some of the best society meetings have been those in small counties where the membership may be less than a dozen members.

We have attempted to show what a good live

County Medical Society should be and what it should do. Keeping these things in mind, and by making an intensive drive, it ought not to be a difficult feat to get every non-member who is eligible to become a member. The first requisite however, to good salesmanship is to be thoroughly sold on the proposition ourselves, so that we can more earnestly and more intelligently tell others about it.

Again we wish to state that there are no less than three thousand men and women practicing medicine in the state of Illinois who are not members of the Illinois State Medical Society.

Let us therefore take the slogan, "A thousand new members for 1927," and begin now to prepare for the campaign.

AN ENDOCRINE FAMILY

JAMES H. HUTTON, M. D.,
CHICAGO.

At the present time endocrine deficiencies offer the greatest opportunities for therapeutic correction. For the treatment of these conditions we have a specific in the form of the desiccated gland involved or an extract of the same administered subcutaneously, intramuscularly, or intravenously. For example, hypothyroidism is usually well controlled by desiccated thyroid or thyroxin. The former being probably the better of the two except in a few unusual cases. Ovarian insufficiencies yield good results under ovarian medication administered by mouth or hypodermic injection.

For the hyperactivity of any of the endocrines we possess no endocrine remedy and these conditions are treated, many times with indifferent success, by various drugs or by surgery or some other physical agent designed to remove a portion of the gland or to destroy enough of the cells to reduce its output to within normal limits. It is possible, but as yet far from well proven, that some glands of internal secretion are antagonistic to others but this antagonism is not sufficiently strong to make the administration of the antagonist of any great value in the reduction of the overacting gland to within normal limits. For example, in cases of hyperthyroidism or exophthalmic goiter, the two terms not being used synonymously; while the thymus is said to be antagonistic to the thyroid its administration in this condition is without any marked beneficial

effect. In most instances it is probably entirely without effect either good or bad.

It is true that glycerine emulsion of adrenal cortex has been used with good effect in the treatment of exophthalmic goiter; but, it is quite likely that any good arising from its use in this condition is due to the correction of the accompanying hypoadrenia. In fact, its administration was begun on this basis and on the further fact that many of the signs and symptoms of exophthalmic goiter were believed to be due, not to thyroid hyperfunction or dysfunction, but to hypoadrenia involving the cortex. This belief is supported by some very good experimental evidence.

There is a close relationship between the thyroid and the pituitary but the administration of pituitary is without any good effect in cases of hyperthyroidism. The thyroid and the anterior lobe of the pituitary have "overlapping zones of influence." That is, they seem to have a stimulating effect on many of the same tissues. Notably the growth of the long bones, the development of the genitalia, the body temperature, and the voluntary muscles. When the thyroid is removed the pituitary undergoes a compensatory hypertrophy and vice versa. But the use of one in the treatment of hyperfunction of the other is without avail. Hyperfunction of the thyroid is controlled by drugs, or surgery, x-ray or radium; something that removes or destroys in situ part of the secreting cells. Hyperfunction of the anterior lobe of the pituitary can be controlled poorly, if at all, by surgical removal of part of the gland or possibly by the x-ray or radium in cases where the hyperfunction is due to the stimulating effect of tumor growth. For the most part we are comparatively helpless in the presence of hyperpituitarism until the gland has run its course and the consequent hypopituitarism has made its appearance. This it does in most cases sooner or later. The greater the overactivity the sooner the hypopituitarism makes its appearance. This is especially true when the hyperpituitarism has been of preadolescent occurrence. This tempts one to the suggestion that the anterior lobe has only a certain definite amount of secretion to contribute to the body economy and that if this be expended riotously in hyperpituitarism it is exhausted so much the sooner.

It seems quite likely that hypofunction of the

endocrines is more readily transmitted to the offspring than is hyperfunction or a normal degree of functional activity. At any rate we see more cases of hypofunction than of hyperactivity and of two parents, one presenting the usual signs of normal function of the endocrine system and the other being subject to hypofunction of one or more glands, the children will, in most instances, show the effects of hypofunction of one or more of the endocrines. This is in accord with Mendel's law.

Incidentally, it may be remarked that most of the discussion or dispute as to whether a case is of monoglandular or pluriglandular etiology and should consequently have mono or pluriglandular therapy is wasted effort. Even experimental evidence is mostly in favor of the view that the endocrines are very closely related and that when one gland is involved another one or more is apt to be secondarily affected, and more of such evidence is being accumulated. Clinical evidence almost entirely favors this view. The only valid objection raised against *sensible* pluriglandular therapy is that one may not be able to properly evaluate his results and may not know which gland caused the improvement in the patient's condition. From a scientific standpoint that may be a valid excuse for monoglandular therapy, but have we any right to delay our patient's recovery by administering only one gland at a time, withholding the second until the first shall have exhausted its effect, when recovery might be hastened by giving two or even three glands at the same time?

As illustrating some of the points raised the following endocrine family is presented.

Mr. C. L. was six feet in height, weighed one hundred forty-five pounds, and showed some signs at least of a moderately active anterior lobe of his pituitary gland. His hands were long, slender, and "artistic." His feet were long and thin and his body was apparently of normal proportions. That is, his upper measurement approximately equaled the lower and his span was about equal to his height. He was mild mannered and artistic in his tastes and occupation. He died at the age of sixty-eight of cardiac decompensation.

His wife was four feet eleven inches in height and at the age of seventy, when she first came under the writer's observation, she presented the

typical signs and symptoms of bilobar hypopituitarism with some thyroid deficiency.

In addition to her stature she had the hands so typical of anterior lobe insufficiency, i. e., short, broad palms, that is, broad in proportion to their length, and short tapering fingers. Deficiency of the posterior lobe was exhibited by typical girdle obesity.

Her thyroid deficiency was shown by her coldness, lowered basal metabolic rate, slow pulse rate, skin of alabaster color, malar flush, padding of the dorsum of the hands, feet, and supraclavicular spaces, and scant hair suit.

These parents had six children, five girls and one boy. The oldest, a daughter, M., is now aged fifty-two. She is five feet two inches in height and during most of her life has been quite heavy. The obesity was of the typical girdle type. Her short stature, small hands and feet and delicate frame work of the body indicate a mild degree of preadolescent hypopituitarism of the anterior lobe. Her obesity is of the type indicating insufficiency of the posterior lobe. The thyroid was rather full and the eyes so prominent as to suggest exophthalmos, but there are no signs of hyperthyroidism present. Dorsal padding of the hands and feet and some supraclavicular padding suggest mild hypothyroidism. The thyroid enlargement is probably of the compensatory variety.

Her menstrual history is not significant except for some hemorrhages due to uterine fibroids of which she has a large number, some of them as large as a child's head. She has never been pregnant.

One son, aged forty-nine, height five feet four inches, weight one hundred sixty-five pounds. His hands are of the short tapering pituitary type with palms rather broad in proportion to the length. His skin is smooth and moist and he has always had a great deal of perspiration over the body but especially marked on his feet. The nails are in good condition, not ridged or brittle. The body hair suit is rather scant. The hair on the head is heavy and fine. About the age of thirty-five much of it was lost. This was especially marked on the lateral aspects of the forehead. The teeth are regular and of fair quality without over-crowding. The first teeth were of poor quality. He has been married five

years. He has no children and his wife has never been pregnant.

He has a rather prominent thyroid, amounting, perhaps, to a small goiter, if one can tell when a slight enlargement of the thyroid becomes a goiter. The eyes are quite prominent but he shows no other signs of hyperthyroidism. The enlargement is probably in the nature of a compensatory hypertrophy.

Past: At birth he weighed twelve pounds. This excessive weight was probably due to thyroid deficiency. He talked at six months, got his first tooth at seven months, and walked at fourteen months. His progress in school was about average. He had three convulsions at six weeks of age due to "sewer gas." He was "delicate" until seven years of age, after which he became fairly rugged. His voice changed slowly at the age of sixteen.

He undoubtedly has some pituitary deficiency involving the anterior lobe, as shown by his short stature, typical hands and feet. The posterior lobe became involved later as shown by the girdle type of obesity. He has also a mild degree of hypothyroidism.

The second daughter, W., is now forty-six years of age. She is fifty-eight inches in height and weighs ninety-five pounds. She is the most typical example of hypopituitarism of the anterior lobe preadolescent as to time that the writer has ever seen. Her hands and feet are typical of this condition. Her shoes have to be made to order because of their miniature size. The same is largely true of gloves. Her menstrual periods began at eighteen. They were regular, occurring every twenty-six days and being painful only the first day. The flow lasted three days and was moderate in amount. She was married at the age of twenty-eight and has never been pregnant. At the age of thirty-six she had a typical attack of hyperthyroidism with the usual signs and symptoms. Basal metabolic rate was not being done at that time so we do not know what it was. This attack subsided under medical management and has never recurred. Her basal metabolic rate has been determined a number of times in the last five years and has always been within normal limits. At thirty-eight she had an attack of appendicitis. When the belly was opened the uterus was found to contain a large number of fibroids and was removed by supravaginal hysterectomy. She has

had many attacks of "nervousness," substernal distress, and abdominal distress for which no local pathology could be found. She frequently has attacks of weakness, nervousness, and trembling, characteristic of anterior lobe insufficiency. She has some pigmented areas about the hair line, temples, angles of the mouth, and sides of the neck such as occurs in hypopituitarism of the anterior lobe. She has had at one time a tubercular involvement of the left upper lobe which has become quiescent. She has never shown signs of posterior lobe insufficiency.

The third daughter, M., is now forty-two years of age and has been having some rather stormy symptoms of the menopause for the past two years. She is five feet two and one-half inches in height and weighs one hundred twenty-six pounds. The indications of endocrine deficiency in her case are probably less marked than in any other member of the family. She is a little below the average height, otherwise there are no signs of anterior lobe deficiency unless the rather stormy menopause might be assumed to have some relation to that factor. Her periods began at fourteen and have always been irregular, the intervals varying from twenty-four to thirty-six days. The flow is very profuse, lasting five days. There is considerable pain just before and during the flow and a good deal of headache at the same time. I have noticed that menstrual pain beginning before the flow starts and continuing throughout the period is, in the majority of cases, due to ovarian insufficiency. At least it is relieved by ovarian therapy. This ovarian insufficiency might be due to a primary anterior lobe insufficiency.

The skin is in good condition, the nails are not ridged nor brittle. The hair is heavy and coarse, the teeth are regularly spaced but of poor quality. This fact might also have an anterior lobe insufficiency as a primary factor.

Her birth weight was twelve and one-half pounds. She got her first tooth at six months, talked at less than one year of age. Her progress in school was very rapid. She has had no serious illnesses.

The fourth daughter, I., is now forty years of age. She is five feet four inches in height and weighs one hundred nine pounds. She is the tallest of the daughters and the only one that has ever been pregnant. Her first pregnancy terminated at full term, a boy, weighing twelve

pounds. Lived only a few hours. Delivered by an osteopath. She had a stormy accouchment and puerperium. There was considerable laceration requiring some suturing. The stitches sloughed out and were replaced three times before healing occurred.

A daughter was born about eighteen months later, weighing seven and one-half pounds. Delivery occurred without mishap and the daughter is now nine years old, in good health and showing few signs of endocrine deficiency. A third child was born nine years later, weighing eight and one-half pounds. Pregnancy and labor were without mishap or complication of any kind.

As will be noted above, this daughter is the tallest of the girls. She is very slender. Her hands and feet have no markings indicating endocrine deficiency. The skin is in good condition now but she had evidently a very bad acne from puberty, at the age of eleven, to the time of her marriage at the age of twenty-seven.

The periods began at eleven, the intervals were always less than twenty-eight days, and are now twenty-one to twenty-five days. The flow is profuse, lasting three to eight days. Before marriage she had considerable pain lasting throughout the periods with a good deal of nausea. This pain and nausea disappeared after marriage.

The skin is in good condition, the nails are not brittle, the hair suit is normal, teeth regular but of poor quality. Her past illnesses do not seem to have had any endocrine factor or background.

D. S., the youngest, age now thirty-six years, is five feet one inch in height and has weighed up to one hundred forty pounds. This obesity was of the characteristic pituitary type. There has been considerable reduction of this obesity under dieting and pituitary medication but the figure is still typical of the bilobar hypopituitarism. The stature, small hands and feet, shape of the hands and fingers, being typical for anterior lobe insufficiency, while the obesity, as stated, is of the posterior lobe deficiency type.

Her weight at birth was eight pounds. She had her first tooth at five months, talked at eleven months and walked at one year. The teeth were irregular, crowded and of poor quality. The lower laterals protruded so that they were unsightly and were extracted for cosmetic reasons. One upper lateral incisor was absent. The

other was tusk-like and was extracted for the same reason as the lowers

The menses appeared at fifteen, were very irregular during the first year. The intervals were too long and the flow was scant, lasting one or two days. There was considerable pain with some nausea which disappeared after marriage.

She had some fibroids which caused some irregular bleeding for a short time. These were treated by radium and x-ray. As a result the periods became irregular and have practically disappeared. However, she had the morning nausea and vomiting of ovarian insufficiency with abdominal pains radiating down the thighs due to the same condition before either radium or x-ray were used. These symptoms are easily controlled by ovarian residue subcutaneously.

She has prominent eyes suggesting exophthalmos. The thyroid is rather prominent. Formerly she frequently had a sense of constriction about her throat, apparently due to transient enlargement of the thyroid. These symptoms were easily controlled by small doses of thyroid. The basal metabolic rate has always been minus about ten per cent. on the several occasions it has been determined in the past five years. She has never been pregnant.

As the signs of ovarian insufficiency increased she developed a marked chilliness. The temperature of her skin was below normal and she was uncomfortably cold even during the summer. Her basal metabolic rate was found to be minus seventeen per cent. even when she was taking thyroid grains $\frac{1}{4}$ TID. This was increased by two grains daily and the coldness disappeared within forty-eight hours. There was a coincident improvement in her general condition.

This daughter, it will be noted, had a bilobar hypopituitarism, ovarian insufficiency probably secondary to that and a mild hypothyroidism. According to some experimental data the thyroid insufficiency might also be secondary to and due to the hypopituitarism.

Conclusions: All the children except the fourth daughter had hypopituitarism of the anterior lobe. Two of the girls and the son had also a mild degree of insufficiency of the posterior lobe. The youngest daughter furnishes a classical picture of bilobar hypopituitarism with secondary ovarian insufficiency and mild hypothyroidism.

Of the four married daughters only one has ever been pregnant and three of them have

uterine fibroids. These three also have the most marked insufficiency of the anterior lobe and two of them have some insufficiency of the posterior lobe.

Knowing the relationship between the anterior lobe and the generative apparatus one might speculate as to whether hypopituitarism of the anterior lobe might have some causative relationship to the fibroids. He could go no further than speculation. This is interesting, however, when one listens to men who claim to have noted a reduction in the irregular bleeding connected with uterine fibroids and a reduction in their size coincident with anterior lobe therapy.

THE ETIOLOGY, PREVENTION AND TREATMENT OF POSTOPERATIVE WOUND INFECTIONS*

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It has been the experience of surgeons all over the civilized world that from time to time a series of postoperative wound infections would appear in their work, the source of which they are at a loss to ascertain. A thorough search of the literature discloses the fact that even in the very best conducted clinics and hospitals the average of surgical wound infections is somewhere between 7 and 17 per cent. In our own work we have experienced periods during which there were very few wound infections following surgical interventions, when suddenly the bugbear of postoperative wound infection, with all its unpleasantness, would appear as from a clear sky and render both surgeon and patient disappointed to a greater or lesser degree. Study of the literature and conferences with other surgeons have convinced the writer that while postoperative wound infection cannot always be entirely eliminated in surgical work, its occurrence may be minimized if one carefully follows and scrutinizes his work minutely and conscientiously.

As is the practice of every conscientious surgeon, when postoperative wound infections have made their appearance we have questioned the sterility of our own hands, we have blamed the catgut we used and frequently have substituted one brand of gut for another. We have searched

for a probable cause of the infection, and occasionally have pinned the blame onto the surgeon, the interns, assistants, etc.—without much success. After going through this experience for some time and after searching every place for a possible infection-atrium, we have arrived at the following conclusions:

1. That rigid pre-operative preparation of the patient is essential.
2. That it is not so much the type of catgut one uses, presuming, of course, that it is thoroughly sterile, as the quantity of it that is imbedded in the abdominal wall.
3. That operative trauma of the structures



Fig. 1. Peritoneum closed with continuous catgut suture.

of the abdominal wall plays an important part in the etiology of wound suppuration.

4. That the leaving behind of dead spaces, with the inevitable usual accumulation of extravasated blood and lymph, is to be strictly avoided.

5. That the surgeon and all his assistants must observe rigid asepsis in the preparation of their hands and everything that comes in contact with the operative wound must be unquestionably sterile.

As to the preparation of the patient, the fol-

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lowing method is a routine that is always carefully carried out at The American Hospital:

Give patient tub bath upon entering the hospital, with the exception of patients too ill to have a general bath.

Scrub field of operation thoroughly with green

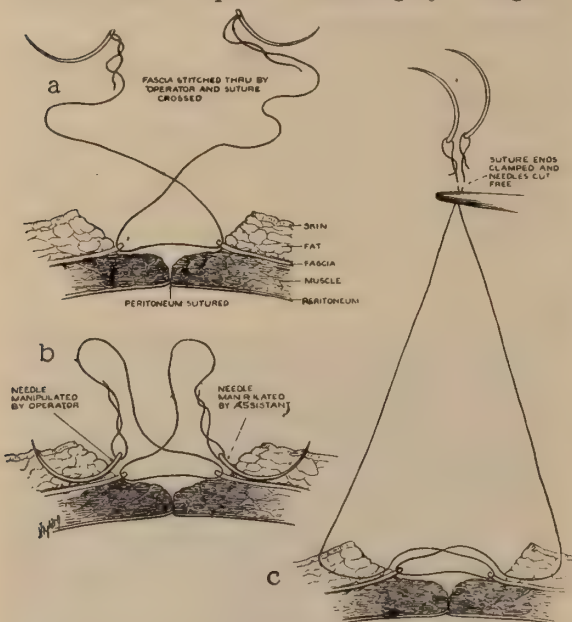


Figure 2.

a. Fascia stitched through by operator and suture crossed. Peritoneum sutured.

b. One needle manipulated by operator and the other needle manipulated by assistant.

c. Suture ends clamped and needles cut free.

soap for five to ten minutes. (Use sponges, never a stiff brush.)

Shave parts, avoiding abrasions and razor cuts.

Ablute with sterile solution and dry field of operation well with sterile towels. Then, with hemostat and sterile sponge apply ether; follow this with 95 per cent. alcohol, and then with a 2 per cent. iodine solution, always allowing the field to dry between each application.

Fasten sterile towel securely over the prepared field, using adhesive strips.

Before taking patient into operating room remove sterile towel. Cover edges of blanket, top and bottom, with sterile towels.

Apply in succession ether, alcohol and iodine, allowing the field to dry between each application. Cover with sterile towels.

We have found that one of the chief factors in the production of wound infection is the introduction of too much catgut. The routine that is being followed in the majority of hospitals, so

far as I am aware, is to close the peritoneum with a running catgut suture. Then the muscle is sutured with either an interrupted or continuous suture of catgut, and subsequently the fasciae undergo suturing in the same manner. Very often an interrupted or continuous catgut suture is used in the panniculus adiposus. If we now recall how much catgut the tissues are expected to care for by absorption in the layers enumerated, besides the many knots that are invariably tied in the ligation of bleeding vessels, is it any wonder that we often find the absorptive powers of the system over-burdened in the attempt to digest and carry away the tremendous amount of catgut thus deposited in the abdominal wall? In other words, the result is increased leukocytosis, enormous active and passive congestion, liquefaction of the products of repair, and finally invasion by the different coccus groups.



Fig. 3. Tissues *en bloc* of a dog twelve days after laparotomy.

Keeping these facts in mind we have endeavored with a modified technic to as nearly as possible eliminate these unwelcome manifestations. The principles involved are: Limiting ourselves exclusively to a single, running suture of catgut to close the peritoneum, (Fig. 1). We ligate a the catgut we employ. We depend much on

hemostasis by forcipressure. The rest of the wound is closed by one dermal suture or a suture of silkworm gut or silk, as the surgeon may pre-bleeding vessel here and there and that is all for. We use dermal suture for convenience, but equally good results can be obtained with silkworm gut or silk. The type of suture material does not matter as long as it is unabsorbable, absolutely sterile, and holds in its grasp the fasciae, panniculus adiposus and skin. The method of placing this suture in a figure-of-eight form is important and is best illustrated in the accompanying schematic drawings (Fig. 2, A, B. and C).

It is needless to point out that no surgeon of experience will permit himself to traumatize structures any more than is absolutely necessary and unavoidable. In this category of traumata belong the harsh pulling of the abdominal wound with retractors for an extended period, mass ligatures of subcutaneous tissues, devitalization of fat, fasciae, muscles and skin by the careless application of artery forceps, laparotomy sponges that are too hot, etc. In other words, the gentler the handling of the tissues the better the results, and the less the likelihood of infection.

By thoughtful manipulation the single suture method of closing the abdominal wall that is here described will tend to eliminate dead spaces.

As to the necessity for strict aseptic preparation of the operative field, and of the hands of the surgeon and his assistants, as emphasized above, little need be added. However, it is a well known fact, as recently pointed out by Lillienthal, that no matter how careful one is in the preparation of his hands, the usual micro-organisms which are responsible for wound infection cannot be entirely eliminated from the subungual spaces, and from certain parts of the cutis of the hands. In order to do away with that source of infection Lillienthal demands that everyone connected with the operation shall submerge their finger-tips in tincture of iodine and permit them to dry in the air after the preliminary washing of the hands and donning of sterile gloves.

In our experience we have found (notwithstanding Lillienthal's observations to the contrary) that iodine has a tendency to cause dermatitis, discoloration, and a rather unpleasant burning sensation of the finger-tips. We, therefore, after the hands have been thoroughly

scrubbed, submerge our fingers for a few minutes in a 1:1000 solution of metaphen before putting on sterile gloves. We prefer dry gloves.

The careful preparation of the hands, the complete sterilization of everything coming in contact with the operative field, and the method of suturing which we have here described have given us the surprising results of close to 100 per cent. of primary unions in our work.

Before using this method clinically I delegated my first assistant, Dr. Frederick Grunck, to try the method on experimental animals and the results he obtained were excellent. Figure 3 shows the tissues *en bloc* of a dog thus operated on, and conclusively proves that the sutures placed as I here described will permit thorough healing and cicatrization of muscle, fascia, panniculus and skin. Not until we were thoroughly convinced of the feasibility of the method did we attempt to apply it in our operative work on patients.

We believe, with Freeman, that external pressure properly exerted tends to eliminate dead spaces and the consequent tendency to infection. However, in our work we do not use sponges as advised by Freeman.

In our last series of cases two fecal fistulae resulted following appendectomies, and one superficial infection. We have had similar experiences before. This condition is apparently due to perforation of the lymphoid tissue of the cecum by the passage of the needle carrying the ligature. Simple ligation of the appendix, without inversion of the stump by the time-honored purse-string suture, will eliminate this source of wound infection.

Study of the literature of recent years discloses certain points in connection with the causes, prevention and treatment of postoperative wound infections, but before dealing with these it seems desirable to consider the mechanism of wound healing.

M. T. Burrows,¹ of the department of surgery, Washington University, St. Louis, stated that in infective granulating wounds the connective tissue overgrowth is excessive. The infected wounds first fill with granulation tissue; as the infection is removed the epithelial membrane of the surrounding skin spreads over the granulation tissue, which then contracts.

Much attention has been given to the behavior of leukocytes in the healing of wounds. It is

asserted that while they play an important role in removing products of infection, (bacteria, necrotic tissue, and other noxious substances) there is little evidence that they are of any importance in stimulating and controlling the growth of the fixed tissue cells. An active growth of epithelial cells is seen in the areas behind the edges of the wound, but these areas frequently contain few leukocytes. A careful study of experimental wounds in rats and guinea pigs shows that the most active growth of cells is in the stagnant areas of the wound. Outside this area the cellular epithelial layer, and a narrow zone of the less cellular connective tissue undergoes proliferation, and this proliferation corresponds exactly to the area of inflammation, or the area suffering congestion or slowing of the circulation.

Clean wounds, Burrows says, may heal either by an early extension outwards of an epithelial membrane and granulations from beneath, or by a gross moving together of their edges, and a later cementing of these edges to the deeper structures and to each other by granulation tissue. In those parts of the body where the skin is firmly attached to outside structures the former type of healing prevails; where the skin is loose, the latter type is in evidence.

Reverting to the causes of wound infection, Leonard Freeman² of Denver, believes the occurrence of infection depends upon three things: the species of germ, their number, and, last but not least, the resistance of the tissues, which is determined by local and general causes. The local conditions are largely influenced by traumatism from rough handling, and anemia from too tight sutures, as well as by the presence of so-called "dead spaces" filled with stagnant fluid, blood, fat or serum. These dead spaces may possibly be avoided by drainage, exact hemostasis, careful suturing and external pressure. Freeman dwells especially on the factor of external pressure. He uses rubber bath sponges, made of porous rubber, which are permanently elastic and exert a constant pressure. They can be easily sterilized and adjusted anywhere. He states that surgeons have been impressed with the increased likelihood of suppuration when operating upon patients in whom infection already exists, no matter where the focus may be. The risk of infection likewise is increased by the presence of devitalized tissues.

H. Halliday³ also states that abdominal wounds are prone to sinus development, owing to the fact that it is difficult to apply effective pressure. There is greater tendency to postoperative oozing and the consequent formation of dead spaces. The sinus is usually situated between the deep sheath of the muscle and the subcutaneous tissues, in the form of a tunnel of granulation tissue placed on the deep fascia and surrounded by a sheath of scar tissue which becomes more dense as the condition continues, and easily yields to infection.

A. Carrel⁴ believes that even a distant abscess can retard the regenerative process in aseptic wound healing.

The question of an internal focus giving rise to wound infection is also discussed. Meyer⁵, after an experimental study of the prophylaxis and treatment of wound infections observed in the department of medical research of the University of California, says, that since it is now definitely established that tetanus spores, or any other gas gangrene producing anerobe, ingested on raw vegetables may multiply in the intestinal tract and remain there in large numbers, the surgeon should fully appreciate this insidious source of wound infection before he suspects his surgical instruments, sutures and dressings. Meyer thinks it is not unlikely that many of the postoperative anerobic infections are from within rather than from without. *Catgut and wound secretions are excellent media for the culture of microbes from the intestinal canal.*

We find many excellent contributions to the literature in regard to operative technic as the source of post-operative infection. Collins and Ritz⁶, of St. Luke's Hospital, Duluth, Minnesota, claim that carelessness on the part of an operator is occasionally responsible. In some instances of postoperative infection the sterilizer was found defective, and positive cultures were obtained from sterilized packages. The surgeon's hands were often insufficiently sterilized. *The thumb, index and middle finger, especially of the right hand, should be most carefully scrubbed, and possibly dipped in a strong antiseptic solution and allowed to dry before aseptic gloves are put on. A punctured or torn glove should be changed at once. Nurses should be very careful not to puncture or tear gloves in handling instruments, nor should they touch instruments with gloved hands except when absolutely neces-*

sary. Sometimes the cause of infection was traced to the operator or nurse coughing or breathing in the direction of the wound. The alcohol used for soaking the hands if repeatedly used loses its strength (specific gravity) and may thus become a cause of insufficient sterilization.

Goff⁷ thinks that too little attention is given to the details of the surgical incision. Faulty union occurs in a large number of clean, as well as in contaminated, wounds made under standardized procedures. He studied 3,000 abdominal wounds in the Women's Hospital of New York. Of these 2,755 were classified as clean and 245 as contaminated at the time of the operation. The incisions were principally longitudinal, median and intramuscular, and in all cases thorough preoperative surgical preparation and protection were provided.

The peritoneal transverse fascia and posterior sheath of the rectus muscle were closed by continuous sutures of plain catgut. The rectus muscle was not sutured. The anterior sheath of the rectus muscle was closed by continuous mattress sutures of prepared, twisted silk, with both ends emerging at both ends of the wound. The deep layer of superficial fascia of the abdominal wall was closed by a continuous mattress suture of prepared silk, the ends also being permitted to protrude at the surface angles of the wound. The skin was closed by a subcuticular continuous suture of silk. The removal of sutures commenced on the tenth day, and tincture of iodine was run into the suture tracts. Of the 2,755 incisions classed as clean, 1,645 were closed by the conventional catgut method, and 1,110 by removable silk sutures. Of the 245 contaminated wounds, 158 were closed by catgut and eighty-seven by silk. Both methods were used by several different surgeons connected with the hospital.

The results have shown clearly that with all other factors remaining constant, the adoption of the silk sutures has, in the work of all the surgeons who have used them invariably, resulted in a very decided reduction in the incidence of faulty union. The total average incidence of faulty union in clean abdominal incision, from all causes, has been 12.1 per cent. in wounds closed by absorbable sutures, while with the non-absorbable sutures it was 4.3 per cent. In 1,645 clean wounds closed by absorbable sutures there

were 4.7 per cent. extensive and 5.3 per cent. slight infections. In 1,110 clean wounds closed by nonabsorbable sutures there were 2.1 per cent. extensive and 1.9 per cent. slight infections. Of the 245 contaminated wounds, the 158 closed by absorbable suture showed 8.9 per cent. extensive and 4.4 per cent. slight infections. The eighty-seven wounds closed by nonabsorbable material gave 9.1 per cent. extensive and 3.4 per cent. slight infections. Infection is the most important cause of faulty union.

Some surgeons considered that the site of the incision was a factor in the infection, and that the longitudinal median incision was less likely to become infected than a transverse suprapubic incision. In the case of one surgeon who used the catgut suture only, the incidence of faulty union was 14.8 per cent. in a series of 108 clean transverse suprapubic incisions, and 12.6 per cent. in a series of ninety-five clean longitudinal incisions. In the case of another surgeon who used silk sutures only, there was faulty union in 2.4 per cent. of a series of 165 clean transverse wounds, and in 4.2 per cent. of a series of ninety-six longitudinal wounds.

Our experience speaks in favor of longitudinal incisions. The Pfannenstiell incision is used in our work only where necessity demands it on cosmetic grounds exclusively. A liberal longitudinal incision gives far greater access to exploration and thorough surgical work than does the Pfannenstiell or any of its modifications. However, Goff believes that the incidence of faulty wound union can be kept as low, if not lower, in the transverse type of incision as in the longitudinal, despite the current belief to the contrary.

As to the mortality resulting from faulty union, in a total of 3,000 cases there was an economic loss of 3,086 hospital days due to defective wound union. In the 2,755 clean wounds the loss was 1,587 hospital days, and in the 245 contaminated wounds 1,499 hospital days.

The average incidence of infection in clean abdominal wounds closed by catgut sutures was 10 per cent., and in those closed by nonabsorbable sutures 4.0 per cent. For the contaminated wounds with drainage the infection figures are 41.1 per cent. for absorbable and 37.7 per cent. for nonabsorbable suture material.

L. Bazy⁸, in an exhaustive article, stresses the value of preoperative serotherapy and vaccina-

tion against infection. It does seem that surgeons do not recognize this procedure as still of practical value in surgery.

Bergel⁹ found that the fibrin and not the cells of the granulation tissue protects the wound against infection, and produces granulation tissue by injections of fibrin.

There is a growing tendency in recent literature to revive the use of antiseptics in connection with surgery. Brunner¹⁰, for instance, discusses antiseptics in connection with the prevention and treatment of wound infections. He experimentally tested vuzin (quinin alkaloid), trypaflavin (diaminomethyl acridin chlorid) and rivanol (ethoxydiamino acridin) in solutions, powders, and even in the form of deep tissue injections. Trypaflavin and rivanol have a pronounced selective effect on streptococci, less on staphylococci. Rivanol is less toxic than trypaflavin and possesses protective properties when used as a powder. Both exhibited antimycotic action when used as surface disinfectants, but their effects are frequently restricted to the coccal flora. For wounds already infected they fail to surpass iodine. In combination with tissue reaction by the lymph cells, the disinfectants may arrest an infection, but the same results may be obtained with iodine-alcohol. Clinically, vuzin and rivanol do not give as good results as trypaflavin.

The general experimental findings have emphasized the great prophylactic value of iodine in wound infection. Several other German authors have praised rivanol, for example, Block¹¹.

Goljanitzki¹² thinks that in infected wounds healing is improved by increased blood flow to the part. Whole blood is the only antiseptic agent that has the capacity of destroying bacteria that have invaded the tissues without killing the tissues. On this principle Goljanitzki has built up a treatment for infected wounds. He injects into the tissues in the vicinity of the infection a 1:5 own blood solution, with the addition of 0.25 per cent. procaine, and sodium chlorid up to the normal physiological solution. During a day or two he injects from 5 to 25 c. c. He uses this method also when healing is slow.

Mercadé¹³ calls attention to the fact that in a wound the normal supply of the tissues from within is cut off or interfered with. To overcome this he has been treating wounds of all sorts with peptone mixed with manganese. Whether this acts by supplying elements from

without or by attracting them from within, the healing proceeds with exceptional rapidity. Mercadé thinks that for wound healing asepsis is not sufficient, and that materials for regeneration must also be supplied. For local enhancement of regenerative processes the writer knows of nothing better than the scientific application of aluminum potassium nitrate, as pointed out in previous communications^{14, 15} and ¹⁶.

The question of the influence of food on wounds has been considered by F. Sauerbruch¹⁷, who noticed that wounds secreted less, and that the proteus and pyocyanous microbes disappeared from the secretions when patients were kept on a diet with a surplus of acid values. On an alkaline diet the wounds were edematous, pseudomembranes formed, and the germs multiplied. He suggests a lowered alkaline reserve in blood for rapid wound healing.

Hermansdorfer¹⁸ also draws attention to the importance of the influence of food on infection and wound healing.

Von Gaza¹⁹ found that the beneficial effects of concentrated salt solutions in the treatment of wound infections was not due, as assumed, to hypertonia or to the osmotic effect. The action of salts of various kinds should be considered as due to their ions or, rather, cations. The sodium ion causes swelling and loosening of the granulation tissue, while the calcium ion has the opposite effect. Of the various salt solutions tested the most useful for wound tissues were potassium chlorid, sodium chlorid, and especially calcium chlorid in 10 per cent. solution. The first two do not especially promote direct epithelial growth, but calcium chlorid accelerates it.

Antiseptic therapy of wound infections has been tried by Browning and Gulbrandsen²⁰ and the results obtained from treating recent experimental wounds opening into the subcutaneous tissues, which were infected with highly virulent diphtheroid bacilli, prove the effectiveness of antiseptic therapy.

Several German writers recommend no tamponing of wounds. This practice seems to have been originated by O. M. Chiari²¹ in 1922. Blumenthal²² and Kumaris²³ are more recent expounders of the good results of the method in avoiding infection and other complications of wound healing.

Vilray P. Blair²⁴, in considering the influence of mechanical pressure on wound healing, says

that in much of the reparative surgery the operator will be tremendously handicapped until he realizes that the satisfactory result is more dependent upon the intelligent application of the older surgical principles than upon an aseptic technic as ordinarily interpreted, though the latter is never to be disregarded. He believes that the surgeon who employs pressure in a selective, purposeful manner will get bigger returns than he who applies it incidentally, or even as a matter of routine. Based on his experience, he has evolved a marine sponge pressure dressing, which, if carefully applied and made of sponges of proper quality, will maintain an even pressure over an irregular surface, or one without underlying bony counterpart. In applying this pressure one must use his surgical sense to gauge the desired tension, but it can be used with the assurance that he has more leeway in making this pressure than with any other padding substance with which Blair is familiar.

Heidenhain and Fried²⁵ have shown that in postoperative coccus infections timely and correct administration of Roentgen-rays have in the majority of cases produced a favorable termination of the infection.

Besredka²⁶ found that cutaneous applications of vaccine soaked dressings were more effective against the development of surgical infections than subcutaneous vaccine injections, which caused considerable induration and general reaction.

Bass, Soupault and Brouet²⁷ also treated various purulent affections by Besredka's method, and found that the streptococci, staphylococci and the pyocyanus germ are not killed. Only the filtrates, free from bacilli, are used for the dressings.

SUMMARY

1. In a series of experiments on animals, and in our hospital work we have found that wound infections and their sequelae can be eliminated in the great majority of instances by careful technic, as outlined in the preceding pages.

2. The experiments referred to have proved that wound infections are usually due to the imbedding of large quantities of catgut in the abdominal parietes. Consequently, the less catgut used the less likelihood of infection.

3. Careful adherence to the principles of asepsis and recognized surgical procedures in connection with all operations is a *sine qua non*.

4. Fecal fistulae with secondary wound sup-puration can be eliminated by discontinuing the time-honored pursestring sutures around the appendiceal stumps.

5. The iodination of the abdominal wound with 2 to 3 per cent. of tincture of iodine solution immediately after the peritoneal closure is a definite step forward in frustrating postoperative wound infections.

6. In treating infected operation wounds the earlier such treatment is instituted the better. Release of tension, evacuation of noxious accumulations and free drainage, coupled with what appeals to the surgeon to be the best method of combating the invading microorganisms, are the anchor sheets of therapy in this class of cases.

7. Avoid suprapertoneal fat while suturing. If fat is permitted to protrude into the wound it may be the cause of hernia.

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ALLEGED BACK INJURIES

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E. ST. LOUIS

Industrial physicians and surgeons, for years, have faced the problem of trying to restore to admitted normalcy alleged injuries to backs among employees—the onset of symptoms being claimed to have first started following an effort that reason tells us was not of sufficient force to have possibly caused injury to a normal back. And despite all the efforts of the traumatic, orthopedic, and general surgeons as well as the consultant internists and possibly the genito-

urinary specialists, these back patients have gone on for months, yes, for years with no admitted improvement in their subjective symptoms.

This problem has existed from the days of the old "railroad spine," and has continued through, unfortunately, too many years since the beginning of the roentgen-ray period, but in the last few years with the increased technical ability of our roentgenologists, it has been possible to eliminate organic changes in the bony structures of the back which could indicate even possible injuries in the type of back which the writer wishes to bring to your attention.

Hippocrates mentioned the fact that some recurring diseases affected persons having other chronic disease areas, which if the latter were removed, cured the recurrent disease. Benjamin Rush, back in the 1800's reported the cure of certain recurring diseases by the extraction of diseased teeth. More recently Frank Billings¹ wrote of the "Etiologic relations of chronic focal infections to arthritis," and just last year E. C. Rosenow² wrote of his experimental work as well as clinical studies on focal infection and elective localization, or, the selective action of certain focal infection organisms, and about the same time, 1924, Chas. H. Mayo³ wrote of Infection and its relation to general and local disease.

But the most specific work of the relation of focal infection to arthritis was done by T. W. Hastings⁴ under the heading "Complement Fixation Tests for Streptococci in Infective Deforming Arthritis, or Arthritis Deformans." And the most recent work by Reginald Burbank and L. G. Hadjopoulos⁵, conjointly gave the results of their investigations whereby they were able to prove serologically that there were three major types of streptococcus to be considered, namely, Type A arthritis, reacting to hemolytic streptococci and belonging to the iso-atrophic and in the pure form produced peri-arthritis. Type B arthritis, reacting similarly to hemolytic streptococci but of different fixing properties, this type being aniso-atrophic or deformans.

Type C arthritis, reacting to streptococci of the viridans type and belonging to the osteo-arthritis or productive form, early bone changes

often being demonstrable clinically by crepitous and by the x-ray, and they show that if the pure type cases were not arrested or cured early, there was a tendency for further changes to occur due to mixed types, and that an early periarthritic type might through mixture of the types become a deformans type or productive or hypertrophic type. And they also showed that a chronic productive or hypertrophic type might through an active tonsillitis, for example, engraft on a synovial area (hemolytic in type) and acutely flare up an old chronic hypertrophic joint. They also further showed that a fair percentage of cases or individuals who were suffering from chronic constipation or old colitis have a marked tendency to affect complement fixation in certain strains of non-hemolytic streptococci isolated from the intestinal tract of similar arthritic cases, and further they were of the opinion that this type of organism was of the transition form of streptococci hemolytic with certain properties lost through secondary intestinal implantation. And they ended their report with the statement that certain pathological conditions have long been known clinically to be precursors of arthritis and that they had serologically confirmed and proved the clinical observations, and I heartily agree with them in this statement.

In view of all these recited investigations, as well as many others that could be cited, it would seem that the question of the cause of the condition called hypertrophic osteo-arthritis and peri-arthritis can hardly be further reasonably disputed, and that the condition must be infective and not traumatic in character.

A great deal of the above apparent facts have been accepted clinically for years, as regards involvement of the knee, shoulder, elbow, ankle, wrist and fingers etc., but when this same type of arthritis is spoken of as existing in the vertebral column, there seems to have been a rather too long period of confusion and uncertainty existing and this in spite of the fact that practically the same type of bony structures are involved.

The peculiar spur formations on the anterior lips and on the sides of the bodies of the vertebrae have been observed by roentgenologists for years, and all sorts of conjectures have been made as to their cause, from the belief that they were the results of repeated traumas over a long period of time when found in the backs of people who had done hard work all of their lives, to the

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belief that these spurs were due to metabolic changes in those who had been known to have not done any hard labor in their whole lives.

In the past five years, the writer, has had an opportunity to study clinically many hundreds of these types of backs and certain clinical findings have been present so often in these cases that he is tempted to state that these constantly recurring subjective and objective symptoms are almost cardinal symptoms.

When the patients are not swayed from any cause from telling a true history, they will admit that for several years past they have had backs that tired easily and that of late they have had attacks of rather acute severe pain that disabled them for days at a time, and that they had been led to the belief that they had either lumbago or rheumatism or even possibly wondered if they did not have "kidney trouble" of some sort, but they will recite that the present attack was different because when they sneezed about three or four weeks ago, or they got into a draft and took a cold, or the car started up suddenly and jerked their back, or they stooped over to lace their shoes or turned over in bed suddenly, or the fan at the office blew on them pretty strong while they were still rather moist with perspiration or they stooped over to pick up one of their tools that they were going to use in their work, or they started to push a wheel-barrow which they think was too heavily loaded, following which a sudden pain came on in their back and they could almost feel something "pop" in the back and the pain went clear up their back even up to between their shoulders or even the back of their neck, and they went down to their knees, could hardly get their breath for a while and the pain was so severe that it was several minutes before they could get to their feet, and all this took place four weeks ago and no improvement has apparently taken place in the condition. Then they will state, "I got over the other attacks of lumbago in a few days, so I am sure this time that I must have injured my back some way." These histories are so common that they are almost classical.

If these cases are seen and examined early, the patient is observed to stand and walk with the vertebral column held stiffly and any movements attempted in the back frequently cause a grunting with pain, and a painful expression can be observed on the face and both hands are

placed over the lower lumbar area, apparently to support the back.

Inspection of these backs will show the lumbar muscles standing out in rather distinct ridges and on palpation there is found a definite myalgia or painful muscle. These muscles feel hard, like putty that has begun to harden, but do not feel like the tenseness of spastic muscles from protective efforts unless too heavy pressure or palpation is made on them at the start, and if such pressure is made, the muscles quickly take on the tenseness and a spasticity of protective muscle effort. Also in the first few days there is frequently found a slight elevation of temperature, but in a short period of time, the temperature most often becomes sub-normal, and the blood pressure very frequently is found sub-normal. For example, it is not unusual to find a systolic blood pressure of 120 in a man whom one has previously examined and found to have 150 or 160 systolic pressure, or in an individual with sclerotic arteries that one should find a high blood pressure, and this is especially so in the older types of patients. In the younger type of patient there is repeatedly seen an enlargement of both lobes of the thyroid gland without any toxic symptoms of Basedow's disease, and it has been frequently observed that these thyroid enlargements rapidly disappear under treatment or eradication of the focal point of infection. At the same time under proper treatment the temperature comes up to normal and the blood pressure again rises to his usual tension, and very soon following this, the patient will say, "Now I feel much better, and I believe that I am well enough to try to return to work."

This type of back is one that is easily injured. The writer has seen transverse processes fractured by a simple stooping effort, and the physical examination as well as x-ray examination must exclude complicating injuries beyond all reasonable doubt, but when such injuries have been excluded and they can be if careful persistent searching be carried out, then the cases must not be treated as injuries, but the underlying causes or sources of focal infection must be sought for over the entire body and eradicated if possible, following which, the treatment of these cases becomes purely medical and not surgical or traumatic.

We have all seen these cases go on for months

and even years when treated as injury cases, in spite of fixation casts, braces, and other appliances of all kinds, have seen them continue so much longer in period of time than would be required for a normal individual, even if he had had the most severe type of bone injury in the back. What then, is our duty in these cases? After all chances of discoverable injury has been eliminated, we must consistently search for all possible sources of focal infection and begin their eradication, and at this point it is desired to quote Charles H. Mayo, who stated in an address before the Texas Dental Society that 87 per cent of all the deaths in America were due to some type of infection and that of that 87 per cent, 87 per cent came from the mouth. If it would not seem too inordinately immodest, I would like to amend that statement as follows, and say that instead of coming from the mouth, that they come from an area above a plane at the level of the lower mandible. While looking for head infections, one must not forget that, following an old long-standing pyorrhea or acute upper respiratory tract infection now past, by direct extension through the intestinal canal, a sub-acute colitis may persist and be the source of the feeding focal infection. This has been found to be the continued source of focal infection in many cases after the original focal diseased area in the head had been eradicated, and was indicated not only by the clinical findings, but by the findings in varying degrees and amounts of indican, diacetic acid and acetone from one to four plus in degree in the urine.

It is being rather generally accepted today among many medical men that a direct extension infection rather than an extension through the blood stream may account for gastric and duodenal ulcers, as well as inflamed appendices and colons.

What then is it that happens when the sudden acute severe disabling pain occurs in this type of bank? The clinical evidence all points to a breaking down of the individual's resistance or immunity, which resistance or immunity is probably not a great deal over-normal or the average normal, and this broken immunity is usually due to some inter-current accident such as exposure, worry, prolonged hours of work, errors in diet, acute infectious diseases etc., the patient probably having been carrying for a long period of time just a little over a balance of resistant

power or immunity, and suddenly something occurs as above outlined and the break takes place, and with it, the sub-normal temperature, the low blood pressure. There also comes a disturbance in the elimination and a disturbance in the endocrine balance, and the old peri-arthritis and arthritis receive the brunt of the disturbance, and the muscles and the point of their attachment and surrounding soft tissues in the arthritic joint area proclaim their protest, and the train of symptoms that we have all heard so often recited start.

The best article on just what happens in these cases comes from the writings of Ralph Pemberton⁶ under caption, "Observations in Arthritic and Rheumatoid Conditions," in which he shows marked variation in sugar tolerance in these patients and marked changes in the exchange of oxygen and carbon-dioxide gases, in the blood locally and in the vessels in the soft tissues surrounding these arthritic areas. His experiments along these lines are too lengthy and too varied to incorporate in this paper, but his tests prove rather conclusively that the painful myalgic muscles are due to the disturbance of metabolism in the tissues in this area, and that there is a failure of elimination of toxic products or the end products of disturbed metabolism and that they are causative of the sudden acute painful muscles and soft tissues in this area.

Clinically, before the symptoms can be eliminated and cleared up the disturbed metabolism, endocrine unbalance must be corrected, and of course, before this can occur, all feeding focal points of infection must have been eradicated. When such has been accomplished, the temperature again comes back to normal, blood pressure becomes normal, and the symptoms then, and only then, disappear.

The writer realizes that there is still a great deal of investigation necessary to be done in these types of cases and the object that has been held in mind, in reciting these few clinical observations, was to place before you another view of these cases other than those views which you may possibly now hold, and in the hope that in the near future, the combined efforts of physicians and surgeons who see many of these cases may give a correct and definite procedure for accomplishing, not only cure, for these diseased

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disabling conditions, once it is established, but through their advice and treatment prevent their occurrence altogether, by preventive hygiene and medicine.

ECTOPIC PREGNANCY

CAREY CULBERTSON, M. D.

CHICAGO

The pathology of ectopic pregnancy is not described in the text-books as it actually appears and the diagnosis emphasizes somewhat the few cases that are critical, so that the average doctor has the impression that unless the patient shows shock and collapse ectopic pregnancy is not to be thought of, whereas as a matter of fact not more than 15 or 20 per cent of cases of ectopic pregnancy are in a condition that would be called critical or an emergency.

The diagnosis is usually made after the abdomen is opened. The latest statistics on the subject, published as recently as 1922 and 1923, show that less than 20 per cent of the cases are diagnosed prior to operation. It is true that a differential diagnosis is not easy and cases are constantly being presented that turn out to be pelvic hematoceles when they were regarded as something else even in the hands of those who are dealing with this condition frequently. The reason the diagnosis is not made is because it is not thought of. The average man waits until his patient is in shock and collapse and then thinks of it. Another reason is that the great majority of cases are not acute but what might be called chronic in the sense that there is an old pelvic hematocele, old by a few days or a few weeks. The symptoms are not very marked or are very misleading.

In the pathology, taking the uterus with the tube pregnancy occurring in the tube occurs either interstitially or in the isthmus or in the ampulla. Occurring in the isthmus it is a tubal pregnancy because the implantation is in the mucous membrane lining the intramural portion of the tube. In the interstitial pregnancy where the greatest damage is done as far as the gestation sac is concerned but not as far as the patient is concerned, because the blood vessels are opened up and a hematoma is formed which destroys the gestation sac, but the wall of the

uterus is so thick that there is no so-called rupture or external spill of blood. In the isthmus of the tube the situation is quite different. A pregnancy taking place there finds its way through the mucous membrane, but the wall of the tube is so narrow that it is very easy indeed for it to erode its way out into the broad ligament. In either case the spill of blood may not be more than the trophoblast can take care of, so the gestation sac goes on growing.

There is very considerable difference between pregnancy taking place in the tube and pregnancy taking place in the uterus. In the uterus there is a big thick decidua formed, the function of which is to nourish the growing gestation sac and to act as sort of a shock absorber. In the tube there is no decidua. There is a decidual reaction on the part of some of the early embryonal calls, but nothing else.

Sometimes the gestation sac does not go through the wall of the tube, but remains in it and distends the tube and then if the reaction of hemorrhage takes place the gestation sac is embedded and a hematoma is formed. There is another thing that is important and explains why tubal pregnancy is different, that is, that the trophoblast has the same reaction to blood that the endothelial cell has, that is, the blood vessels clot in its presence provided there is no more blood than the trophoblast can act upon.

When the gestation sac extends into the ampulla there is a little different proposition. The ampulla of the tube is so large and so distensible that erosion through the tube wall, a so-called rupture, seldom takes place, so that it will appear as a gestation sac bulging the ampulla of the tube and even extending out into the peritoneal cavity.

Tubal abortion and tubal rupture are not particularly good terms. When the average man, usually the surgeon, speaks of a ruptured tubal pregnancy he means a tubal pregnancy in which there has been a spill of blood out into the pelvic cavity no matter how that spill of blood has been brought about. In the great majority of cases the spill of blood is moderate. The amount of blood spilled depends on two things, the blood vessel it has eroded into and the location of the gestation sac.

The diagnosis is based largely upon the symptoms, and the most common symptom is pain.

*Read before the North Shore Branch of the Chicago Medical Society, January, 1926.

Statistics show that pain is present in 68 to 85 per cent of the cases. The question of amenorrhea preceding the signs of pregnancy is interesting. In a recent paper based on a study of 150 cases, 40 patients had no preceding amenorrhea. That is so common that now amenorrhea is disregarded as an essential in the diagnosis of ectopic pregnancy. The question of external hemorrhage associated with the well-known decidua cast described in the text-books is practically never seen.

In the differential diagnosis the essayist has come to regard it in this way: If the patient has a mass in the pelvis, he thinks of ectopic pregnancy; if she has a mass in the pelvis with metrorrhagia, he thinks of it more particularly; if she has a mass in the pelvis with moderate amenorrhea, he makes a diagnosis of pelvic hematocoele.

DISCUSSION

Dr. G. W. Green emphasized the points in the diagnosis brought out by Dr. Culbertson. Given a woman who is from five to twenty days over time, with a very slight flow and a little pain, then sudden collapse or sudden severe pain and considerable signs of anemia, one can make a positive diagnosis of ectopic pregnancy. He has had two patients who made their own diagnosis on a second tubal pregnancy.

Dr. C. K. Jones asked in what percentage of cases a second tubal pregnancy occurred in a patient who had been previously operated on for tubal pregnancy in the other tube.

Dr. L. A. Juhnke asked how frequently Dr. Culbertson had noticed glycosuria with a free extravasation of blood. He had a case in which the patient had 4 per cent sugar at the time of operation. This disappeared in two or three days.

Dr. Carey Culbertson, in closing, said Dr. Green's point was well taken that many of the cases are not recognized. In answer to Dr. Jones, he said that is a matter of record but is not a frequent observation. He had no statistics on glycosuria in ectopic pregnancy in his own series. That was brought out by Lillian Farrar in a recent paper.

THE DIAGNOSIS AND TREATMENT OF PYELITIS*

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CHICAGO

Definition.—Pyelitis is only a clinical term because an infection is never limited to the renal pelvis but involves at the same time, to a variable extent all of the remainder of the upper and

often most of the lower urinary tract. It is important to keep this in mind from the standpoint of treatment for two reasons; first, because the persistence of the symptoms of either an acute or chronic pyelitis should always lead one to suspect involvement of the renal tissue itself or of the perinephric fat or both and, secondly, because we may be treating a pyelitis when some other portion of the urinary tract is really the primary seat of the infection.

Modes of Invasion.—There are three principal ways in which the renal pelvis can be infected:

(a) Through bacteria being carried by means of its blood vessels to the kidney and the infection extending to the renal pelvis. This is called the hematogenous mode of infection. (Fig. 1)

(b) The bacteria may be carried to the pelvis directly (without a primary involvement of the kidney) by means of the lymphatics of the ureteral wall itself or those of the periureteral sheath (Figs. 1 and 2). This will explain many cases of pyelitis following infections of the prostate, seminal vesicle, female genitalia in which there is no evidence of obstruction or of infection in the ureter, bladder or urethra. This mode of invasion is called the lymphogenous. It has not been as generally accepted as the first named (hematogenous) mode of invasion.

The theory of the direct spread of infection by way of the lymphatics from the colon to the right kidney as first brought to our attention by Franke is not at all proven. It is generally accepted that an infection can be primary in the gastro-intestinal and secondarily involve the urinary tract but in this case the bacteria reach the kidney by the hematogenous route.

(3) The third route has been known for many years but its importance in the spread of infection from the lower to the upper urinary tract is just beginning to be appreciated. Under normal conditions the mechanism at the ureterovesical junction serves to prevent a regurgitation, reflux or back flow of the urine from the bladder when the musculature of the latter contracts on its contents. Under pathological conditions this valve-like protection is defective and there is a more or less free communication of the bladder and ureter (and of course the renal pelvis), either continuously or only when the vesical musculature attempts to expel the bladder contents into the urethra.

This mode of invasion is briefly termed reflux

*Read at the April 1, 1926, meeting of the North Side Branch of the Chicago Medical Society.

and can be demonstrated clinically by injecting an opaque solution (sodium bromide 25 per cent) into the bladder and observing on an x-ray

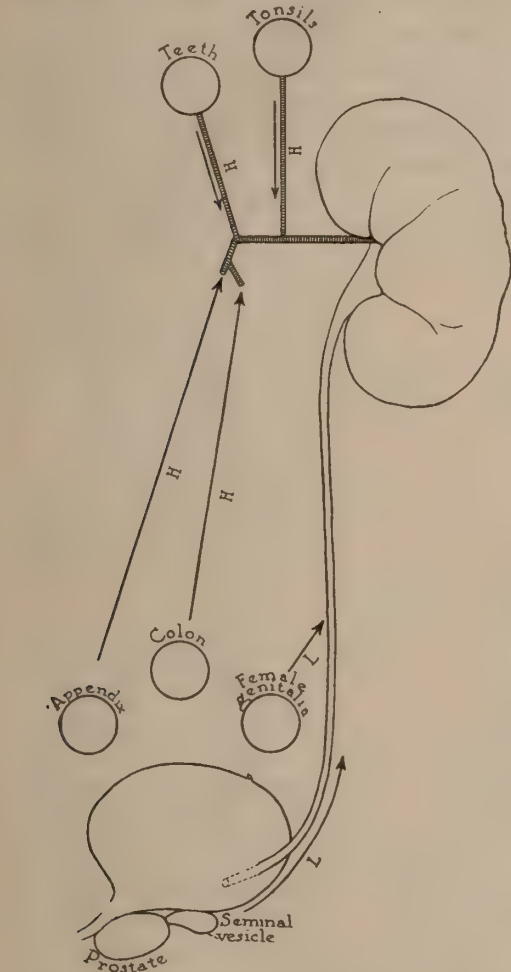


Fig. 1. Diagrammatic representation of how infection reaches the kidney by two of the three principal routes (See text). From the tonsils, teeth, colon and appendix the bacteria are conveyed by the hematogenous route (H) as shown by the arrows. From the internal genitalia of the female, from the prostate and seminal vesicles the infection reaches the kidney by way of the periureteral lymphatics (L) as indicated by the arrows.

film its escape into one or both ureters and renal pelvis (Fig. 3).

I have not mentioned what was formerly called the urogenous mode of invasion, i. e. along the lumen of the ureter because it is difficult to visualize how such a route could convey infection to the kidney unless there was absolute stagnation of the urinary column, a condition which is vary rare unless there is a complete obstruction.

Most Common Bacterial Causes.—Between 80 and 90 per cent of all cases of pyelitis are due to

one of the many strains of the colon group. The remainder of the infections are due to the ordinary pyogenic bacteria, e. g. strepto- and staphylococci. Whether the latter are primary and the *B. Coli* secondary is not of much clinical importance. Recent studies of some 72 *B. Coli* strains have shown that certain ones will thrive best in an acid medium while others are killed by it and grow best when the medium is made strongly alkaline. This observation explains why our empirical method of treatment of pyelitis by alternately giving acids and alkalis is based upon sound data.



Fig. 2. Relation of lymphatics of parametria to the periureteral lymphatics. Arrows indicate direction in which infection can spread.

Relation of Generalized and Focal Infections to Pyelitis.—Although it has been proven that the normal kidney acts as a filter for myriads of bacteria yet under certain conditions these are ar-

rested in the capillaries of the kidney and result in a localized or more diffuse infection of the parenchyma and secondarily of the pelvis. Any generalized infection due for example to pneumococci, streptococci, *B. Coli*, influenza bacilli, etc., will through its toxins so lower the resistance of the renal tissue that localization of bac-

tion of such foci should always be our aim in the treatment of chronic pyelitis.

Postrenal Conditions Favoring a Pyelitis.—By the term “postrenal” is meant any lesion in the urinary tract distal to the junction of the ureter and renal pelvis. It is generally accepted that stagnation encourages the localization of bacteria and through its persistence favors their growth, hence we must be constantly on our guard lest we overlook some conditions (a) in the ureter, bladder, or urethra or (b) in the cen-



Fig. 3. Typical findings in a case of bilateral reflux. Female aged 60 with persistent pyuria and few bladder changes except gaping ureteral orifices. Bladder filled with opaque solution. Note how both ureters and renal pelvis are filled by regurgitation of bladder contents.

teria is favored. In a similar manner foci of infection in the teeth, tonsils, prostate, seminal vesicles, etc., (Fig. 1) will play an important part both in the etiology and persistence of a pyelitis. As will be shown later the elimina-

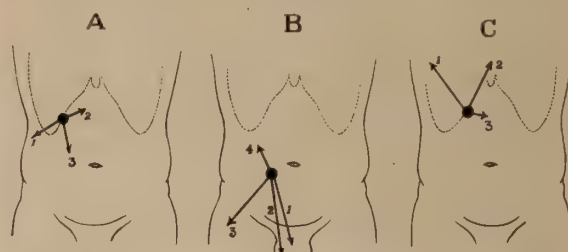


Fig. 4. Diagrams of pain radiation. A. In acute pyelitis. B. In ureteral calculus. C. In acute gall-bladder conditions.

tral nervous system, e. g. spinal cord lesions, which is the cause underlying the pyelitis.

Space will not permit enumerating every possible mechanical or neurogenic cause. In passing, however, let me emphasize the necessity of a careful search for both urethral and ureteral strictures because many of these are overlooked in cases of persistent or recurrent pyelitis.

Pathological Changes in Pyelitis.—In the acute forms one sees all degrees from simple catarrhal to a gangrenous form. The more chronic the infection becomes the more marked are changes which are not as well known even by urologists as they deserve to be. These changes take place both on the mucous membrane of the renal pelvis and ureter as well as the wall proper and the surrounding tissues. The first named (mucosal) changes are those described as granular and glandular pyelitis and the meta plasia ending in leukoplakia. The mural and perimural changes are either marked thinning of the walls with resultant dilatation (Fig. 3) or marked sclerotic connective tissue increase resulting in a rigid walled pelvis or ureter. A knowledge of these changes is essential to those who wonder why in some cases of pyelitis (and of ureteritis) all our efforts to sterilize the contents of the upper urinary tract are nullified by irreparable anatomical changes. In the earlier

stages it is possible to observe a recession of even marked dilatation of the renal pelvis after treatment.

Clinical Forms of Pyelitis.—There is no essential difference from either the standpoint of pathology or of clinical manifestations between a pyelitis as it occurs in infancy or childhood, during a pregnancy or the puerperium or under any similar concomitant circumstances.

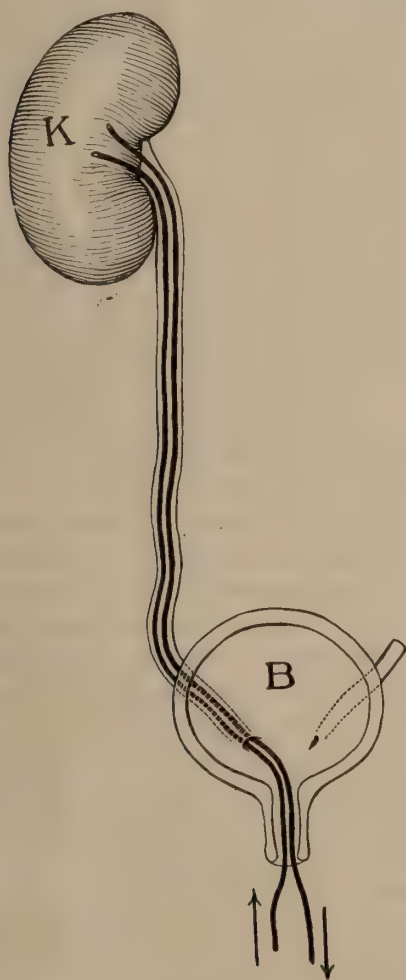


Fig. 5. How one or two ureteral catheters can be left in the ureter for a number of days.

We can divide the cases as we see them clinically into two large groups:

1. Those without localizing signs, i. e., a predominance of generalized infection symptoms and little if anything pointing to the kidney as the source.

2. Those in which the local evidences of infection, etc., point to the urinary tract. In other words, those with localizing signs.

Let us consider these briefly.

1. *Non-localizable cases.*—The symptoms are those of a bacteriemia or toxinemia and include fever of a continuous or remittent type, rapid pulse, more or less stupor, etc. In children the gastro-intestinal symptoms accompanying the above often entirely mask the underlying renal condition.

In the fulminant cases, the high fever with or without accompanying chills, the rapid pulse, stupor and other signs of toxemia, lead one to suspect some severe form of sepsis and search is made in vain for some localizing findings. Many a patient who could have been helped, through early recognition of the underlying renal condition, has been allowed to die with a diagnosis of influenza, malignant form of malaria, typhoid, or cryptogenetic septicemia. In children the persistence of high fever, etc., without localizing signs often leads to a diagnosis of severe gastro-enteric infection, especially if the urine does not contain pus. During pregnancy and the puerperium I have known of cases being called malaria, malignant endocarditis, puerperal sepsis, etc., because no one thought of the urinary tract until attention had been directed to this as the seat of the infection.

The clinical picture of such a pyelitis—or really a pyelonephritis without localizing signs—is not always as grave. There are many cases which pursue a less fulminant course, but let me impress one fact even in these, and that is, never fail to consider the kidney as the source of an obscure sepsis, even though the urine contains few evidences of such infection.

2. *Acute pyelitis with localizing signs.*—This clinical picture is the one usually associated with acute renal infections, but those who place their reliance upon such localizing signs being invariably found are sure to overlook the cases described in the preceding group.

In this second clinical picture we have the familiar signs of generalized infection, such as chills, fever, rapid pulse, progressively increasing weakness, etc., plus local evidence in the form of (a) rigidity over the upper abdominal quadrants (Fig. 4) or over the corresponding iliocostal space; (b) tenderness or pain over the same areas; and (c) one can often feel an enlarged kidney, or at least a mass, when the more acute signs have subsided. One must be constantly on the watch for evidences of spread of

the infection from the kidney proper to the surrounding perinephritic fat.

If a patient does not improve after the use of

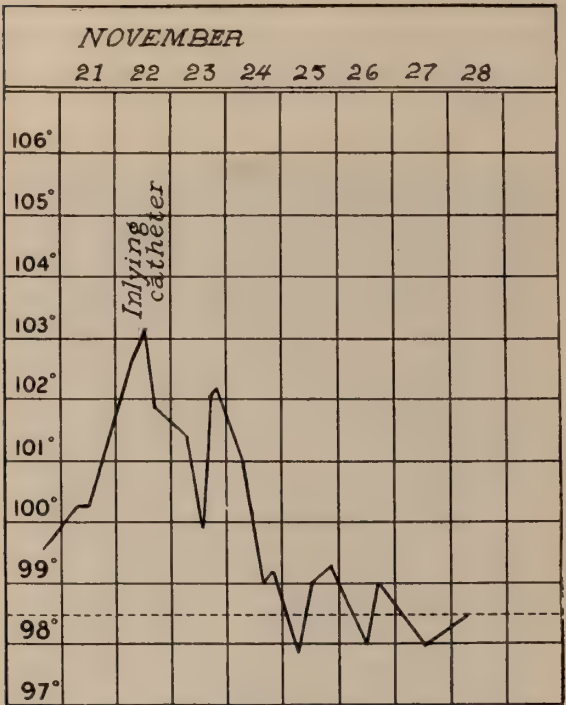


Fig. 6 A.

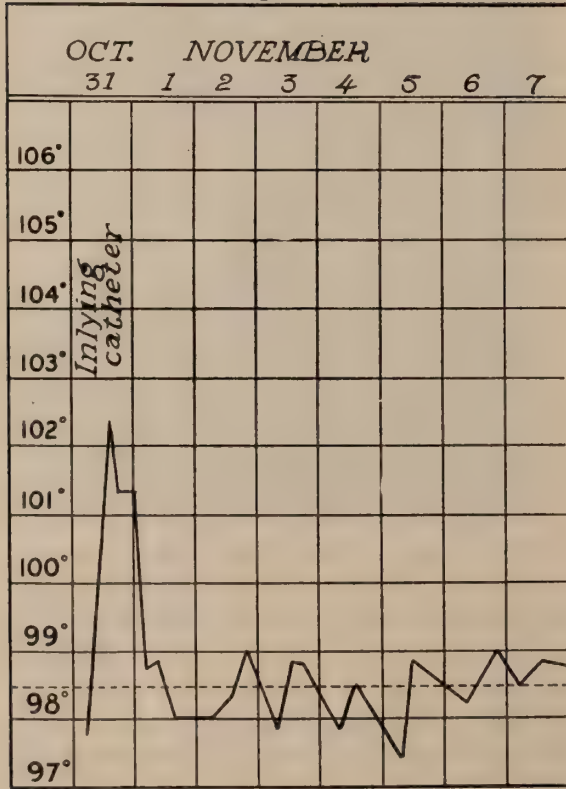


Fig. 6 B.

How temperature dropped after use of inlying catheter in acute pyelitis (girl of 18). B. Same in woman of 40.

urinary antiseptics and of the more direct methods of treatment in an acute pvelitis, to be spoken of later, one is negligent not to think at least of a perinephritic abscess or of irreparable damage to the renal parenchyma, which calls for operative intervention. Percussion of the chest for evidences of displacement upwards of the diaphragm by a subphrenic abscess should always be supplemented, if possible, by radioscopy of the lower chest to observe immobility of the corresponding half of the diaphragm, or bulging upwards due to subphrenic perinephritic abscess. The less severe the clinical picture, the more likely are we to find changes in the urine such as pyuria.

Hematuria as a Sign of Acute Pyelitis.—Our views in regard to the relation of renal or ureteral infections to hematuria have changed considerably during the past ten years. We know, today, that hematuria varying in degree from mild to very severe can be due to both acute and chronic renal infection alone. Not infrequently one sees cases in which the hematuria is so *prolitis* or *Ureteritis*.—Not so very long ago we were fuse and persistent that it scarcely seems possible to be from this cause alone. Few problems present more frequently than to determine the source of a hematuria, and one soon learns to acquire the broader viewpoint, that there are many other sources of hematuria than tumors of the upper or lower urinary tract.

*Ureteral Colics as Symptoms of Acute Pye-*taught that the form of abdominal pain described as ureteral or renal colic was usually due either to a calculus or the kinking of the ureter of an abnormally mobile kidney. Recent clinical observations compel a modification of this view. There are many other conditions in the ureter which must be taken into consideration. Infections of the ureter or the kidney, with or without an accompanying stricture, must be thought of in the differential diagnosis of every case presenting under the clinical picture of both acute and chronic abdominal pain, especially if the mode of onset, radiation, etc., resemble the syndrome usually referred to as ureteral colic.

The Diagnosis of Chronic Pyelitis.—Here, thanks to the ability of applying the various special diagnostic methods so familiar to every urologist, our task is not as difficult. As in the acute cases there are two distinct groups, viz:

(a) Those without any clinical symptoms pointing to the kidney as the seat of trouble.

(b) Those with symptoms such as well localizable pain, tenderness, recurrent ureteral colics, with or without accompanying rise of temperature, etc., which point to the upper urinary tract.

I have mentioned the first group because so many cases of recurrent or persistent cystitis, pyuria or hematuria are treated without benefit because the practitioner has not grasped the idea that a primary cystitis is comparatively rare. In the majority of cases symptoms such as increased frequency of urination, pyuria, etc., are considered to be indicative of a cystitis alone. It is an achievement of modern urology which has shown that many cases with predominance of vesical symptoms have the latter as mirrors of an upper urinary tract infection especially of a pyelitis. A persistence of such symptoms as is also true of a pyuria or hematuria with or without complaints usually ascribed to a cystitis call for a thorough urologic examination.

There are no pathognomonic signs of chronic pyelitis. The diagnosis of the latter is one of exclusion made by means of our present day urologic diagnostic resources. A good clinical history combined with microscopic and bacteriologic study of the urine, cystoscopy, ureteral catheterization, renal functional tests, ordinary radiography and ureteropyelography are all steps which enable us to exclude other sources than a pyelitis of findings like pyuria, hematuria, pain, fever, etc.

Treatment.—Just as in the description of the preceding portions of the subject space will only permit of outlining the broader principles upon which our present methods of treatment rest. Following the same division as followed in the clinical pictures we find:

A. In the more or less severe acute cases without localizing symptoms, one must first exclude other causes of a grave bacteriemia or toxinemia, than the kidney. If this has been done the treatment does not differ from that to be followed in the acute cases with definite signs pointing to the kidney, hence in

B. Acute pyelitis with or without localizing signs our treatment consists in following one of three courses:

1. *Indirect*

(a) Giving large quantities of fluid by mouth if possible, if not by proctoclysis, hypo-

dermoclysis or through use of the duodenal tube.

(b) Absolute rest.

(c) Administration of alkalies and acids alternately. For the former we prefer both in adults and children potassium citrate in relatively large doses. As an acidefier we often employ sodium benzoate or better still some acid

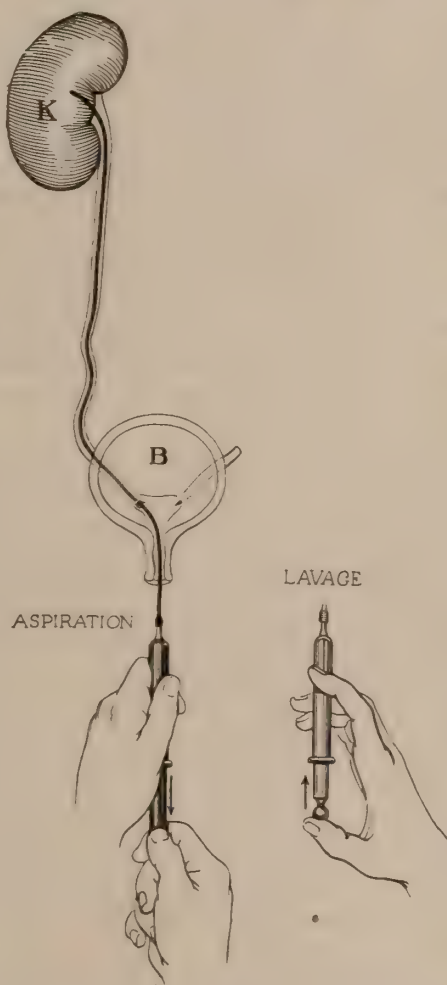


Fig. 7. How the renal pelvis can be aspirated and how it can be irrigated through the ureteral catheter.

phosphate preparation which makes a palatable sour drink. For a long time we did not understand why cases of both acute and chronic pyelitis improved after alternate acid alkali administration. As explained earlier in this paper we now know that certain strains of the *B. Coli* thrive in an acid and others in an alkaline medium.

(d) Urinary antiseptics. That these play an important part in sterilizing the urinary tract can no longer be denied. We have at our disposal (a) hexamethylenamine and its various

substitutes and (b) the more recent caprikol. My own results with the latter have not been as satisfactory as with the older preparations, such as hexamethylenamine which can be given either by mouth or intravenously.

(e) Use of mercurochrome, acroflavin, gentian violet, etc. A sufficiently large number of observations are at hand to show that of these, the first named is worthy of a trial in all cases of severe acute renal infections. At times the severe reactions following the intravenous use of mercurochrome are temporarily alarming. As to acroflavin, it has been shown to be less efficacious when given intravenously than when it is used locally. The same is true of gentian violet.

In a relatively large series of cases of acute pyelitis we have found that we could dispense with all of the above drugs if the principles of local treatment to be next enumerated were followed.

(f) Use of one or more inlying ureteral catheters. We have been able to control many cases by the introduction of one or more catheters (Fig. 5) left in situ for periods varying from 48 hours to two weeks. This method of treatment is of course only applicable to adults but its results are startling (Figs. 6a and b) and cannot be too warmly recommended. We have combined with it the continuous or intermittent irrigation of one or both renal pelves with 1-5000 acroflavin as suggested by Bumpus. We have failed however to note any better results than with the use of the inlying catheter alone which serves as a continuous drain for the infected contents or the renal pelvis.

(g) Lavage of the renal pelvis (Fig. 7). This is a marked advance in the treatment of both acute and chronic cases. It consists in injecting some antiseptic solution through a ureteral catheter into the renal pelvis after aspirating (Fig. 7) the contents of the latter. We use nitrate of silver solutions in strengths varying from 1 to 500 to 1 per cent. for cases of *B. Coli* infection and either acroflavin 1-5000 or 1 per cent. mercurochrome for streptococcus or staphylococcus cases. Recently we have given preference to the use of the inlying

ing catheter for acute and employed pelvic lavage more often in the chronic pyelitides.

Let me again urge you before closing this outline of acute pyelitis treatment never to wait too long for operative intervention if the fever and other symptoms persist or increase in spite of medicinal treatment and the use of the inlying catheter or of pelvic lavage. Many a golden opportunity is lost because the clinician does not appreciate the fact that a pyelitis is only one of the localizations of renal infection and that there is invariably more or less parenchyma involvement. When the latter is extensive, local or internal treatment are seldom of avail. Only operative drainage of the kidney or even nephrectomy will avert a disaster.

Treatment of Chronic Pyelitis.—The principal factor here is to search for and to eliminate if possible one of the following:

- (a) A focus of infection elsewhere in the body. (Fig. 1).
- (b) A possible combination of calculus formation and infection.
- (c) A ureteral stricture, calculus, etc.
- (d) Some form of obstruction in the bladder or urethra.
- (e) A renal tuberculosis in which there is a mixed infection, i. e. both ordinary pyogenic and tuberculous, so that the clinical picture is that of an ordinary chronic pyelitis. In every case of the latter which does not respond to treatment and in which there has been a negative search for the various conditions just outlined, we search repeatedly for the tubercle bacillus.

All of the preceding suggestions mean that the treatment of a chronic pyelitis is based primarily upon the outcome of a thorough urologic study of a given case. Many a discouraging result is due to our failure to do this as a more or less routine procedure. Failure to discover irreparable changes such as extensive thinning of the walls of the ureter or renal pelvis or both is often the price paid for incomplete examinations.

The medicinal and local methods of treatment of chronic pyelitis does not differ essentially from that outlined under the head of the acute form.

104 S. Michigan Avenue.

1. A new soluble form which can be administered intravenously is made abroad and in this country.

THE AMBULATORY TREATMENT OF TUBERCULOSIS*

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One of the most important factors in attaining good results is the recognition of the incipient cases. Even the diagnosis of the incipient form of pulmonary tuberculosis is not as easy as it looks at first glance. Our usual clinical methods, percussion and auscultation, are not able to uncover the tuberculous infection until the anatomical changes in the lungs have reached the size, let us say, of a cherry. When the primary focus is the size of a pea or smaller it is impossible for the clinician to demonstrate it. The x-rays have surely made important progress. I insist upon every patient getting his own picture after the first consultation. The picture is far better than the best case history, for it tells us the anatomical changes of decades in a moment, and permits us to form an objective judgment of the case. We must not forget, however, that there limits to the capacity of the x-ray, regarding the positive as well as the negative results. The early lesions let the x-rays pass. The anatomical changes must be advanced to a certain degree, the glands and their capsules must have a certain age, the infiltration must be rather massive, and even a little calcified to give a good picture. On the other hand, there is no doubt that transient hyperemias, especially those resulting from a weakness of the heart, are sufficient to absorb x-rays enormously and lead to a false diagnosis in cases of bronchitis, bronchiectasis and central pneumonia.

However, I believe that the x-ray diagnosis of the lungs in *acute* diseases is too much neglected. We would learn a good deal in judging x-ray plates if we could control every acute and chronic disease of the lungs by this method. Still greater difficulties are caused by the metastatic form of tuberculosis, especially tuberculosis of the vertebrae, the long bones and the kidneys, which is diagnosed in a rather advanced stage.

Serology is occupied in intricate experiments to find a Wassermann method for tuberculosis,

but none of these methods have any real diagnostic value to date, particularly if compared to the Wassermann results in syphilis. You know the several methods of complement fixation of Wassermann, Klopstock, Bosquet and Negra, Besredka and the methods of the Ruck Institute of North Carolina. I tested them in my laboratory and found that Besredka's method gave relatively the best results, although I have to emphasize that there is no possibility of using all these methods in practice. Even the Besredka method varies extraordinarily in the same patient within a short time. We were not able to draw any conclusions from our results, for advanced patients gave a negative and healthy patients a positive result.

You know that the microscopical results are not reliable, especially in the different forms of metastatic tuberculosis. The pus in the tuberculous foci in the bones, kidneys and skin contains few or no visible forms of tubercle bacilli, but they are in the pus, perhaps in an invisible form, as I can easily demonstrate by my method of direct culture. In many cases this method of culture has been far superior to the microscope and the animal experiment. This method is very useful, but bacilli are not excreted in the majority of cases, especially not in the incipient cases, and only the biological diagnosis is fit to decide the question.

If I summarize I must say that the Pirquet test remains the best means of making an early diagnosis of tuberculous infection in childhood. The reaction is always the same whether it takes place upon, in or under the skin. We in Vienna use only the original Pirquet test, or the dermatubin test. The latter, which consists of a specially concentrated tuberculin mixed with dead tubercle bacilli, is rubbed into the ether-cleansed skin. The reaction is very clear and no doubt is possible as to whether the reaction is positive or not. After one to two days very few red nodules appear, first degree; or a circle of red nodules in the form of an erythema, second degree; or a circle of red nodules and vesicles, third degree.

Last year in Vienna we started a crusade against tuberculosis, based on the dermatubin test. All children entering school were rubbed with dermatubin, and the number of positive reactions varied between 40 and 50 per cent. Now the school physicians pursue the fate of

*Read at Joint Meeting Chicago Medical and Chicago Tuberculosis Societies (through the courtesy of the Chicago Tuberculosis Institute), Dr. Henry C. Sweany, President of the visiting society, in the chair, Oct. 27, 1926.

the children. The results were so satisfactory that the physicians and the public agreed to repeat this test every year, and I wish to accentuate that many of the positive reactions led to the discovery of an unknown case of manifest tuberculosis in the school itself and in the family. This method of observing cases from childhood up seems to me the best basis for an effective, organized fight against tuberculosis.

We surely all agree that the healing of tuberculosis is a matter of years and that the sanatorium treatment is only a short stage in the long course of such a chronic disease. I do not deny that the sanatorium is an important aid, but the backbone of tuberculosis must of necessity be the out-patient treatment at home. Only a small percentage of patients can cease work for a year to hide away in a sanatorium. The professional man with a family, particularly, often refuses to take such a risk. In my country among my colleagues there is a fixed association between tuberculosis and the country, but I am a foe of such a thoughtless manner of treatment. My twenty-five years' experience in the treatment of tuberculosis has taught me that simply sending patients to the country, without any further care and control, is nothing but a loss of valuable time. Very frequently the patients return from the country in a worse condition than before. Under no circumstances should they be allowed to use their time to run about the country. I must also say I am opposed to the simple transfer of patients to the sea-coast or the mountain country without simultaneous consistent medical treatment.

It is a great mistake to expect any pronounced effects from the climate alone. Egypt has the highest death rate from tuberculosis in the world, a fact so often disregarded by those seeking a cure simply from the climate of the desert. Egyptian colleagues have very often warned me against sending patients to Egypt or the North African desert, and I consider the influence of high altitudes quite as ineffectual without proper medical attention. It is also useless to prolong the stay at high altitudes or in the desert for a year, because the organism soon becomes accustomed to the new climate.

What are the measures at the disposal of the physician? If we consider the disease according to its three usually accepted stages, the first stage demands, above all in adults, great tem-

perance in the matter of sports and the various hardening processes. These measures are, in my opinion, easily over-estimated and exaggerated. The vascular system of adults is not able to adjust itself to a pronounced extent, and I have often noticed that the prophets of such measures never lose their chronic catarrhs. Hardening must be exercised in youth in order to attain results. Two boys used to take their daily morning bath in the river, and in the winter they made a hole in the ice and went in. The old people near by looked at them in wonder and said, "They must be very healthy." But they both developed an extensive exudative pleurisy and I saw them in a very bad state. They both recovered, but such an experience teaches us more than an artificial experiment with animals. We are too domesticated a people for such hardening cures, and I believe that a certain precaution is necessary in the use of cold water.

One of the earliest symptoms of tuberculosis is a pleurisy which is found in every case of tuberculosis as adhesions between the pleura. This pleurisy may be postulated in every case, whether it can be diagnosed or not. Even the x-ray is very often not able to show us these dry pleuritides. In cases with pain I have always treated the condition by applying a cingulum, such as we use in fractured ribs, which should be left on for three days. This simple measure suppresses the pain in a short time, and I have the impression that this fixation of the affected side also exerts a beneficial influence on the tuberculous process itself. It is a kind of extra-pleural pneumothorax, which may also have a good effect on other diseases of the lungs, such as bronchiectasis. It is also my experience that these pleuritides are very well influenced by what I call an ocean bath in bed. This is nothing but warm 4 per cent iodine salt water compresses that are applied for the night. I need not emphasize that lying in the salt solution during the entire night is far more effective than the transient process of a bath.

Dry coughs, so characteristic of pleuritides, must be avoided for they increase the symptoms of inflammation by irritation. They must therefore be suppressed, for which purpose I use the following prescription put up in the form of pills: \mathcal{R} . Urotropin 0.2; thebain 0.005; cocaini 0.005; sod. borate 0.01; mentholum crystallatum 0.01, and 0.1 of sympathol, with as much

sugar as is necessary for the pills. The pills should be sucked, as candy

In common with others, I lay weight upon good nutrition, but alimentation is made very difficult if the patient has fever. The treatment of fever, therefore, is a necessity but I very often find it not effectually carried out. I often see that the fever is treated only when it has reached a certain altitude. In my opinion, the temperature must be kept constantly down to a nearly normal level, and therefore antipyretics have to be taken in the morning. I prefer antipyretic medicaments and use the following prescription: Lactophenin 4.0; quinin 1.0; hexamethylenetetramin 2.0; aqua 200.0, and four to five teaspoonsful are enough to keep the temperature nearly normal. I am not in favor of giving one large dose at the height of the fever for it enfeebles the patient too much and weakens the heart.

You all know the horde of drugs that have been proposed against nocturnal perspiration, but I must confess that I have never found any of them satisfactory. The resolution of the small, perifocal pneumonia is, in my opinion, the cause of these nocturnal sweats. It might be well to try strengthening the heart with a little alcohol and irradiating with the quartz-lamp.

As regards hemorrhages, it is doubtless a commonplace that they are not as ominous as was formerly supposed. I am in the habit of giving patients in whom I suspect the possibility of a hemorrhage a printed sheet containing all the usual first-aid measures to be carried out by himself. I have suggested a little case which contains all the medicaments and instruments necessary for stopping hemorrhages of all kinds. It is particularly valuable because it possesses all the necessities ever ready for use. The other methods are the usual ones of autotransfusion in the form of warm packs to the abdomen and extremities. After hyperemia of the legs is attained, I try ligation. I have also observed very good results from the administration of nitrates in the form of amyl nitrate inhalation, or four doses of nitroglycerin daily. The injection of 25 per cent camphorated oil was also successful. The patients with increased blood pressure, however, demand particular care. I do not at all doubt that such patients are unusually susceptible to hemorrhage, as is easily demonstrated

by the occurrence of hemorrhages during coitus or defecation. For this reason I treat such patients by reducing pressure with the aid of nitroglycerin, which can be administered for years without harm, keeping the bowels regular and giving warm foot baths twice daily. In cases of dangerously extensive hemorrhage artificial pneumothorax is the last resort, but one must be absolutely certain as to the side from which the hemorrhage comes. I once saw a case in which the pneumothorax was done on the wrong side, but the patient luckily recovered.

In general, I believe that all these measures may be considered self-evident. The chief thing is that the patient must be observed for long periods of time by his doctor, and the keystone of such attention is systematically executed treatment. To date this treatment has consisted in specific biologic treatment, roentgen and chemotherapy. Regarding chemotherapy, you know that several gold compounds are now the fashion. Crysogan and triphal were rather useless. The former has an undeniably good effect only in cases of advanced lupus erythematosus. The treatment begins with a dose of 1 mg. and should be increased very slowly up to about 1 centigram. The most recent compound is sanocrysin, which is now in the center of discussion. After evaluating my own experience with it, and that of others, I cannot encourage its use. On the contrary, its administration is not without danger, especially if one follows the dosage of the Danish authors. In one case I saw the eruption of an acute pemphigus after injection, with resulting death. In other cases the course of the disease was unfavorably influenced by the appearance of intestinal tuberculosis. The other compounds recommended for chemotherapy are, as yet, in the experimental stage.

The use of x-ray is far less dangerous, and in certain types of cases, such as tuberculosis of the glands and skin, it is of great value. In cases of lymphogranuloma I saw a relatively good result, but the fatal course of the disease was only protracted by about ten years. I have also occasionally seen good results in the x-ray treatment of bone tuberculosis, but often have seen no effect whatever, and this was the rule in tuberculosis of the lungs and larynx. Succinctly stated, the result of every treatment depends upon time. The patients need a sys-

tematic treatment and control, as the specific treatment warrants.

When Robert Koch first published his methods of tuberculin treatment, the Prussian government gave an order to report on the results within six weeks, a sure proof that they were at that time entirely ignorant of the time it takes tuberculosis to heal. It is natural that the clinicians could report only very bad results, but there are other reasons to explain why the time was not ripe for the difficulties of such treatment. First of all, the pharmacodynamics of tuberculin were wholly unknown. One began with doses which are now used only at the end of a long treatment, and it is easy to understand that many patients died as a result of this, but there were many patients long alive who were treated by this method by Robert Koch himself in 1890, as Paul Ehrlich and Stinzing. Secondly, we had no great notion at that time as to the limits within which the healing of a tuberculous focus is still possible, and tuberculin treatment thus received a set-back for a long time. But a renaissance of this method has been developing for twenty years, and now tuberculin treatment is acknowledged as the specific treatment, especially in those branches of medicine in which a clear, objective judgment of the results is possible, as in ophthalmology. The reason such excellent results are obtained in tuberculosis of the eyes is because the focus is small.

You may ask in which way does the tuberculin influence the tuberculous focus. The best object for demonstrating the mechanism of the effect of tuberculin is the common lupus. If one injects 0.5 mg. subcutaneously it will be observed five hours after the injection that the tuberculous tissue begins to show the signs of an acute inflammation. The whole focus begins to swell and to redden. The borders of the sound tissue become sharply demarcated by a white stripe nearly 1 cm. broad, which consists of a transudate. All signs of inflammation increase until the height of the fever is passed. The same inflammatory perifocal reaction takes place in the glands, bones and lungs. If one examines such a tuberculous focus at the height of its reaction histologically one finds that the leucocytes are destroying the structure of the tubercles. All pathologists are agreed that this is a supuration of the tubercle. Clinically we are able to differentiate three phases in the changes pro-

duced by tuberculin. The first consists in the demarcation of the necrotic tissue. The second in the removal of the necrotic tissue. This removal can be effected in two ways: one way leads to the direct removal of the sequester (spytum, fistula), but this is possible only where a connection between the focus and the surface exists. Where no removal is possible, resorption must take place. For example, in the eye or the brain the sequester must be digested or dried up. In any case, the sequester must be disposed of in order to create the best conditions for the development of fibroid tissue. The third component of specific treatment is the capacity to promote to proliferation of fibroid tissue.

In 1909 Robert Koch visited me when I was in Beelitz, near Berlin, to convince himself of the results. In our discussion I summarized my opinion regarding the influence of specific treatment upon the anatomical changes in one sentence: "The tuberculin treatment promotes the fibrous metamorphosis of ulcerous phthisis better than any other form of treatment," and Koch acknowledged this conclusion as the best possible explanation.

It is rather a pity that we have so few necropsy protocols of such treated cases. W. Loewenstein published three cases from the Pirquet clinic. Weichselbaum's successor performed the necropsies and this experienced pathologist stated, without knowing the treatment, "I never saw cases of children's tuberculosis with such a pronounced tendency to healing." These three cases were advanced cases with localizations in several organs; all three cases offered solitary tubercles of the brain as large as nuts or large cherries, enveloped in a thick capsule of fibrous tissue. Such statistics are absolutely necessary in order to clear up the whole question, but the opportunity for autopsies is too rarely given because thoroughly well treated patients die so seldom. I wish to emphasize that only those cases which were treated for at least one year, and received a final dose of at least 10 mg. belong here.

Before discussing the technic of specific treatment we should mention the cases that are not fitted for it. Primarily, no success is to be expected in the cases in which life is limited to one year, but even in such cases we should risk it because a systematic treatment is the best consolation, and we may be surprised in some cases

by the results attained. I refuse under any circumstances to try the treatment in cases with periodical headaches. The focal reaction, so necessary in the lungs, the skin and so forth, is dangerous in the meninges because such cases are very suspicious of chronic tuberculous meningitis, and even great solitary tubercles may be encapsulated. Cases of heart disease, pregnancy and nephritis demand a certain precaution in the dosage, but I have never seen a bad result which I could attribute to the treatment. Hemorrhage is not a contraindication, except in cases with increased blood pressure. I believe those cases should be excluded, especially in ambulatory treatment.

The dosage use depends on several factors. First of all, ambulatory treatment with tuberculin demands greater caution than treatment in a sanatorium. The natural intelligence of the out-patient must replace the medical observation in the sanatoriums. Greater caution is necessary in an exudative case than in a fibrous case. I prefer to begin with an emulsion of bacilli on the exudative forms. The reason for this is that the focal reaction in such cases should be limited. The third factor upon which the dosage depends is the organ in which the tuberculosis is localized. As to the metastatic forms of tuberculosis, such as the eyes, the bones, the skin, and so on, you will recall the hints in my introduction. I differentiate between resorption and discharge of the pus. If you strive to have the pus discharged, as in the lungs, kidneys and fistulae, you must risk a strong focal reaction. If, however, resorption is the aim of the treatment, a certain precaution is necessary because the capacity for resorption is limited in many cases (eye).

The interval which must be respected during the injections is to be estimated from the three forms of reaction, which are: the local reaction at the point of injection, the focal reaction and the general reaction. In any case, all signs of inflammation must have disappeared before the treatment may be continued. According to my experience, the injections may be repeated once a week.

It is always a question as to how long treatment should be continued. I can only say that the injections must be given as long as the progress of the disease is not stopped, which means at least two to four years. In respect to

the length of treatment, it makes no difference what the form of tuberculosis is. The healing of any form of tuberculosis requires years, and I believe that the neglect of this fact is at the bottom of many unsatisfactory results. All methods of healing tuberculosis take time, whether they are carried out at high altitudes or at sea level. The demarcation and exfoliation of the focus requires the longest time, then the proliferation of fibrous tissue sets in.

Regarding the technic of injection, I am an enemy of the use of millionths of milligrams. I always begin with a tenth of a hundredth of a milligram. I am led by the idea of producing real tuberculous foci, not with living but with dead tubercle bacilli which make the same anatomical structure as the living ones. I have always injected greater quantities of dead tubercle bacilli intramuscularly, and have thus been able to produce all the microscopical and clinical symptoms of tuberculosis, which developed into a real, small cold abscess, which then penetrated and healed in eight to ten weeks which the blue scar so typical of such lesions. For what reason did I wish to risk such disagreeable accidents? I wished to mobilize these immune organ systems, such as muscles and subcutaneous tissue, to co-operation in aiding the sensitive ones. These real tuberculous foci usually heal within a few months, and the organism learns to cure these foci better and better the more often this artificial healing process is repeated. These resistant organs must be taught to get rid of the bacilli in order that they may help the defenseless ones.

But we must look at some of the therapeutic problems. Are there any proofs for this theory in practice? The question can be answered in a scientific way. One of the most exactly working specialties is ophthalmology, and the tuberculous foci may here be controlled very easily and the effect of the tuberculin treatment is to be read in the eyes. With a few ophthalmologists I plead for the specific treatment for twenty years, but now it is acknowledged everywhere, and the percentage of healing has increased from 10 to 15 per cent. to 80 and 85 per cent. This is due to the small size of the tuberculous foci in the eye, and the results are excellent even in the advanced cases. The second object with which to test my opinion is the tuberculosis of the genitourinary system. You all know the

helplessness of our therapy in cases in which both kidneys, both testes, bladder, the vesiculae seminales and the prostate are affected, and such cases are fit to decide whether a treatment is good or not. A famous urologist of Vienna has sent these cases to me for treatment. Since 1905 I have proposed that we must use the same identical virus which causes the disease as an antigen, and therefore we have to make an autovaccine in all chronic cases. In such inoperable cases I cultivate the strain directly from the virus by means of the above described method, make an autovaccine and inject great quantities into the muscles. One of these patients developed a hydronephrosis which made operation unavoidable. The histologic examination showed the surprising result that only scars of tuberculous foci were to be found and a stricture of the ureter. All other cases showed a surprising amelioration which surpassed all expectations. In all these cases the abscesses persisted for two to three months.

Now we must consider the symptomatic signs of healing in the lungs. I may pass up the bacteriological criterion in emphasizing the necessity for frequent examination of the sputum by means of culture. The most interesting point for us is the objective analysis by means of the clinical methods. For this purpose it is well to recall the anatomical changes which accompany the healing process. Calcification, which plays such a great role in the mind of the laity, is actually subordinate in the lungs, as our famous colleague, Wells of Chicago, showed us. The real anatomical basis of the process is fibrous cicatrization. This simple fact already indicates the answer we may expect to our clinical examination. The results of percussion will remain the same to a great extent, because the lungs will never become normal again. Therefore, carefully executed percussion will often show the anatomical changes far better than will auscultation. I formerly had my pupils begin the examination with auscultation and they would find normal breathing in the lungs, but if they then began percussion they were surprised to find extensive dullness where they had heard the normal breathing. In the same way one finds normal breathing over healed pleurisies, but the percussion discloses anatomical changes. Auscultation offers much

more difficulty. It is not necessary to speak of the disappearance of rales, for it is well known that in certain cases progress is stopped in spite of rales, and dry rales especially may always be present, often caused by pleural adhesions, far more rarely by bronchiectasis. More stress must be laid upon the character of the breathing. In the healing process the parenchyma of the lungs is replaced by fibrous tissue. If the quantity of such tissue is very small one will hear normal breathing; if the small quantity covers the apex in the form of a pleural cap the breath sounds are weakened. This decreased breathing is a sign of healed tuberculosis, but it is also a sign of incipient tuberculosis if this portion of the lungs does not breathe well. If the fibrous tissues replaces a greater portion of the lungs, the breath sound becomes sharper and sharper, or bronchial in character, especially in the prolonged expiration, which I always take as a symptom suspicious of tuberculous infection, even in the right apex.

What signs do the x-ray give us for differentiation between healed and progressing stages? It must be noted in the beginning that postmortem examination reveals healed and progressing stages side by side in many cases. We must, therefore, not look too much in the fluoroscope, but there are certain very reliable symptoms. I wish to again emphasize the necessity for taking photographs at intervals of one or two years in every case. Our science and the patient as well will profit by the combination of this comparative method and the clinical observations. The first of such symptoms is the disappearance of shadows. There is no doubt that they may disappear in childhood in the lungs as well as in the glands. They also disappear in adults, but then only when the lesion is a fresh one. If the process has been chronic in adults the shadows do not disappear. On the contrary, they become more sharply defined, which gives us a second x-ray criterion for judging the stage of the process. A third symptom which I have never seen mentioned in the literature is a certain lamellation to be seen only in the plate, and due probably to a hypertrophy of the interstitial tissue. These stripes correspond to several layers of fibrous tissue. The fourth symptom is that of displacement of organs; for example, of the mediastinum, the trachea, the diaphragm,

etc. A certain reduction in the intercostal spaces of the same side should also be mentioned here.

Surgical measures in tuberculosis must be limited to the advanced cases. The indications for the application of a pneumothorax are well known and I will therefore lay particular stress upon the contraindications. In the first place, I have never observed satisfactory results with this method in patients over forty years of age, and on the contrary there has very often been a bad turn in the course of the disease. The heart at this age cannot stand the changed conditions of pressure so well, and the rigidity of the vessels make it far more difficult for the organism to adapt itself to the new conditions. Nearly all specialists agree with me on this point. Secondly, I need not emphasize too much that an active, progressive infection of the other lung is a certain contraindication to the measure. The effects of pneumothorax treatment are very good if the indications are carefully observed, and the air is kept in long enough. It often takes five years. There are cases in which pneumothorax cannot be applied because the pleura is adherent or obliterated. In such cases the exeresis of the phrenic nerve is the next step which may be substituted. The paralyzed half of the diaphragm then rises and compresses the lung on that side. In a number of cases the exeresis, even if as a single measure, has been carried out and proved itself very efficacious. To date I have never observed any bad complications as a result of this procedure. In single cases, in which the exeresis was carried out only as a preparatory operation, the thoracoplasty proved itself unnecessary, the pressure of the paralyzed diaphragm being sufficient to promote the fibroid induration. Therefore, it is useful to begin with exeresis in the cases in which surgical treatment must be used. The thoracoplasty should be reserved for cases with cavities, in which all other measures have been fruitless.

I must beg you to take these considerations only as such, for an exhaustive treatment of any of these points would be a lecture in itself. In such a chronic disease as tuberculosis the time spent in a sanatorium can be but a short lap in the long course of the disease. Ambulatory treatment is therefore of the very greatest importance in these cases, and the back-bone of such out-patient care is, in my opinion, the specific biological treatment.

ADVANTAGES OF THE CLOSED METHOD OF TREATING EMPYEMA

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There are three great advantages in the closed method of treating empyema.

1. The method is simpler and safer than any other.
2. The convalescence is shorter, more comfortable.
3. The occurrence of chronic empyema is less frequent.

The method is simpler. A few c.c. of novocaine injected into the interspace at the site of choice, amply suffices for an anesthesia. A trocar, snugly fitting catheter, a scalpel and a clamp constitute the instrumentarium. The trocar is inserted through the anesthetized portion of interspace. The obturator is withdrawn and the catheter, clamped at its distal end, is quickly inserted into the empyema cavity. The trocar is withdrawn keeping the catheter clamped, first, distal and then proximal to the trocar so that no air is at any time permitted to gain access to the chest cavity. The catheter is anchored by an appropriate method and the actual procedure is over.

The method is safer. The immediate mortality in an empyema operation is in the vast majority of cases due to the production of an open pneumothorax. The dangers of an open pneumothorax are (a) compression of the so-called "sound" lung as well as the "affected" lung with the consequent diminution of available air, or vital capacity, (b) to the shock produced by the to and fro swing of the mediastinum during the phases of respiration. With the closed method of treatment no open pneumothorax occurs and these dangers are obviated.

The convalescence is shorter. No empyema can be considered cured until the empyema cavity has been obliterated. Obliteration of the cavity is brought about chiefly by the re-expansion of the lung, partially by the rising up of the diaphragm, and very slightly, or not at all, by the pulling over of the mediastinum, the growth of granulation tissue or the sinking in of the chest wall. In the time honored operations of rib resection air is allowed to rush into the

pleural space, the lung, unless firmly held out by adhesions, immediately tends to collapse and the cavity instead of being decreased is increased in size. With the closed method on the other hand, for each c.c. of pus that is aspirated a nearly equal amount of lung re-expansion must occur to take its place. Thus with the closed method the cavity is being diminished from the very first.

The method is more comfortable. The after treatment in the closed method consists in the main of repeated aspirations of the empyema cavity contents and repeated injections of small quantities of Dakin's solution for the purpose of liquifying the pus. Thus all the pus is aspirated with a syringe and emptied into some convenient receptacle. This is in marked contrast to the condition of the patient after a rib resection, who for the first part of his convalescence is continually draining pus into his bandages. From the standpoint of the physician and the nurses the closed method should not be regarded as too simple. Constant alertness and attention are necessary.

The occurrence of chronic empyema is less frequent. Chronic empyema is due to incomplete obliteration of the cavity, except in a small group of cases in which it is due to a foreign body, bronchial fistula, osteomyelitis of rib. Failure of the cavity to obliterate follows fixation of the lung in a collapsed or partially collapsed condition by adhesions. This is much more apt to result after an open pneumothorax because the lung held compressed against the mediastinum expands but very gradually as the thorocotomy wound diminishes in size. In the closed method of treatment the lung is almost completely expanded after the first few days of aspiration. The pleural thickening which is common in a chronic empyema and which in the case of the parietal pleura may often reach the thickness of one inch or more, occurs especially in the presence of a pneumothorax. Where no pneumothorax exists it is true that the pleura will proliferate due to the infection but not nearly to the extent as when both infection and pneumothorax are present. A thick tough pleura binds down the lung at the borders of the cavity and interferes or may absolutely prevent the re-expansion necessary to obliterate the cavity.

Bronchial fistula at times interfere with the closed method in two ways, 1, by allowing air to

enter the cavity and thus producing a pneumothorax from within, 2, by interfering with injection of the material necessary to liquify the inspired pus. In the case of a bronchial fistula the Dakin's solution may produce so violent a spasm of coughing that its instillation must be discontinued. However, in the vast majority of cases the fistula is small and heals spontaneously as artificial drainage is established. This obtains equally whether the closed or the open methods are used.

Much has been written in late years of the danger of an osteomyelitis of the ribs contributing to the chronicity of the empyema. This might well be true, and is probably due to sequestra cast off on the inner surface of the ribs falling into the empyema cavity and acting as foreign bodies. However, in spite of my definite preference for the closed method I must admit that I have seen no cases which have acted this way. I have seen numerous cases of osteomyelitis of the ribs following rib resection for empyema but except for the persistent sinuses, and, in one case at least a metastatic osteomyelitis, there have been no other sequelae.

Chronic empyema is one of the most obstinate of diseases, the patients are usually extremely uncomfortable and although not actually bedridden are nevertheless chronic invalids. Even if the closed method of treating empyema did not reduce the immediate mortality the way it does, or make the patient more comfortable during the convalescence the way it does, the closed method would be indicated because of the fact that by expanding the lungs before firm adhesions have formed, the empyema cavity becomes obliterated, and thus the incidence of chronic empyema is reduced.

THE MANAGEMENT OF RESISTANT SYPHILIS

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As resistant syphilis are here designated those cases of syphilis that do not yield to the ordinary treatment if pursued in accordance with the generally accepted rules. The resistance may be indicated by the undue continuation of clinical symptoms or by the obstinate persistence of laboratory symptoms, such as a positive Wassermann reaction.

The management of these cases can be successful only if the treatment is based upon the bio-pathology of each particular instance. The "hit or miss" policy of the so-called "standardized" treatment, that substitutes hard and fast rules for the intelligent application of the physician to the case in hand and treats the disease but neglects the patient, will not accomplish much should difficulties arise. A study of each individual patient must be made to ascertain just where the difficulties lie and whence they come. This study is not so exacting as it may seem to be and happy results are frequently accomplished also in cases of resistant syphilis if a few basic principles are observed.

It is true, the main objective to be realized is the same in all instances: it is the eradication from the body of the patient of the causative agent of syphilis, the treponema. The infinite variety of circumstances, however, under which this our goal must be reached, necessitates a constant adaptation of our therapeutic measures. The belief, so prevalent among medical men and greatly strengthened by the glittering promises of chemotherapy, that our specifics act as anti-septics and, when administered, simply kill the specific organisms, is fallacious and misleading. It is now established beyond all doubt that the action of these remedies is not so simple. Neither arsphenamine nor mercury nor bismuth kills treponemata when added to them in the test tube in those concentrations which they attain in the human body. They must, as it is usually expressed by most authors, first be actuated by some agency within the patient before they are able to become therapeutically active. This agency, as I have shown in various papers,¹ is made up by the specific antisiphilitic ferments of the body whom the remedies serve as complements. Neither these ferments or their complements, when alone, can rid the host of the infecting microbes. Both must work together if good results are to be achieved.

FERMENTS AND RESISTANT SYPHILIS

Therefore, if we provide the necessary complement by administering a specific remedy and the desired work is not accomplished, that is, if the case proves resistant, our first consideration should be given to the status of the ferments. Without their cooperation nothing can be expected and all our treatment is in vain.

There are many ways to stimulate the production and activity of ferments. An almost un-failing and rarely disappointing way is to see that the patient gets plenty of fresh air and, possibly, sunshine. It has proved to be good policy to give to patients with resistant syphilis in this direction the same instructions that we are wont to give to patients with tuberculosis. The closer the syphilitic approximates the tuberculous in the hygienic rules indispensable for the latter, the less cases of resistant syphilis will be met with. For instance, if syphilitics, who, in spite of several courses with specifics, retain their positive Wassermann reaction for years, make extensive fishing or hunting trips or change their vocation from an inside to an outside job, let us say, from that of a clerk to that of a taxidriver—in the great majority of instances they return after six months or a year with a negative blood test, even though no remedies have been taken in the meantime. If, however, by force of circumstances, these more radical steps can not be taken, such lesser measures as extended daily walks, perhaps from or to the place of business, should be recommended. Their benefit will be commensurate with the efforts made.

In support of this fresh air regime, light baths from a quartz or arc lamp may be added with benefit. Also autocondensation treatments from a diathermic apparatus have proved of excellent service as an adjuvant. Even simple hot water baths may help occasionally much to break the resistance of syphilis in consequence of the higher temperature of the body they engender. Thus, it is a well known fact—especially emphasized by older writers—that cases of syphilis complicated by fever are, under the actuating influence of the higher temperature upon the ferments, cured more readily and with less medicine than is ordinarily the case. The good results obtained today in syphilis of the central nervous system by the inoculation of malaria also bear witness to the superior results obtained under conditions which stimulate the action of the body cells and their ferments.

Another way to increase the production and activity of ferments in cases of resistant syphilis is the parenteral injection of foreign proteins. Milk, typhoid vaccines, tuberculin and a number of proprietary preparations have been used for this purpose with pleasing results. The stimula-

tion accomplished with these proteins is non-specific and of general character. It brings much the same results as those obtained with the physical agents given before.

As to the choice between the physical and chemical means employed to stimulate ferment activity in cases of resistant syphilis, the condition and the attitude of the patient are decisive. In this case the one, in that case the other measure may be preferable. Generally, however, an appropriate blending of both measures will bring the best results.

ANTISYPHILITIC SPECIFICS AND RESISTANT SYPHILIS

As stated above, our specific antisiphilitic remedies act as complements, that is, they act only in conjunction with the specific ferments of the body. If all our injected remedies were used by these ferments without waste and without deleterious action elsewhere, the treatment of syphilis would always be simple, effective and harmless and only infinitesimal quantities of the drugs would be needed to accomplish the desired results. How little, for instance, of mercury is required under conditions favorable for the action of the specific ferments is shown in cases of syphilis accompanied by high fever. Excellent results have been obtained under such circumstances with just mere traces of the metal. However, such ideal working conditions for our remedies exist only exceptionally. In the vast majority of instances, the bulk of our remedies never gets a chance to serve the purpose for which it is injected and none of it may reach those treponemata that are hidden at protected places, as we will see later. To overcome this handicap, we customarily administer doses that are far in excess of what actually can be used profitably. This procedure is, however, not without most serious drawbacks. While arsenic and mercury are excellent tonics for the inner organs of the body when used in minimal quantities, they are destructive poisons in the doses employed in the treatment of syphilis. Especially upon the thyroid, our main detoxifying organ, arsenic and mercury have a most deleterious action. This fact should always be kept in mind when treating syphilis with specifics.

Furthermore, if we consider the additional fact that also the specific syphilitic poisons developed during the course of the disease have a

similar deleterious influence upon the inner organs of the patient, so that a great percentage of all syphilitics in the later stages of this scourge suffer more or less from a curtailed function of the inner organs, and especially of the thyroid and the adrenals—we can readily understand why the remedies we administer to cure the patient so frequently acquire a baneful influence upon the course of syphilis in so far as the chances of the patient for recovery are decreased and cases of resistant syphilis are developed in the same degree as the quantity of the injected remedy becomes too large or, especially, as the specific treatment is continued too long. With one course of specific treatments following indiscriminately the other in quick succession, the cumulative action of the drug is bound to become a menace to the patient. That, for instance, mercury may remain in the body in an inactive form for months and years only to be re-activated at some special occasion has been reported in literature many a time. I saw one of my patients developing a severe mercurial gingivitis during an attack of influenza with high fever three years after the last mercurial treatment. Nevertheless, I have seen patients, physicians themselves, who during a continuous round of treatments had received 75 or more arsphenamine injections, not to mention the unnumbered mercurial injections. The only excuse they had to offer in justification of this thoughtless procedure was that they had received the "standard" treatment.

Thus, to the damage done by the specific syphilitic poisons is added the further damage done by our remedies and the resistance of many rebellious cases of syphilis is increased rather than diminished by the intensive specific treatment usually employed under such circumstances, as it destroys by degrees the very defensive agency of the body upon whose cooperation we are depending for success.

How much our remedies may, and do, frequently harm the inner organs is impressively shown by Carrera's² observations on the deleterious influence of arsphenamine and mercural upon the kidneys. The figures may be small, but the lesson is big. Of 30 untreated syphilitics he had a urine of normal urea and glucose content, albuminuria was present in 5% and traceable bile pigment in 10%. After a thorough arsphenamine treatment of 25 syphilitics all had a urine of normal urea and glucose content,

albumin was present in 8% and casts in 20%. After mercurial treatment, 45 syphilitics had albumin in the urine in 35%, traces of glucose in 4%, biliary pigments in 22%, and casts in 60%.

These figures are food for thought and should lead the way in the right direction. To break the vicious circle in these resistant cases that are due to overdressing with specifics, the physician will do best to stop all specific medication and devote his attention, first of all, to the up-building of the patient by employing of those non-specific physical and chemical means above mentioned whatever seems appropriate for the case in hand.

"ZONES OF INHIBITION" AND RESISTANT SYPHILIS

One more, and perhaps the most important, reason for the development of cases of resistant syphilis is the fact that in many instances the administered remedies do not reach the treponemata. Syphilis is, at first, a general infection. The causative organisms swarm throughout the body with the circulating fluids, the blood and lymph streams. Gradually, however, as the defensive mechanism of the host develops and begins to function,³ their progress is checked. They are killed and disappear, remaining only at such places where they succeed to entrench themselves. This entrenchment comes about by the formation of a localized edema which surrounds the invaders, curtails or obstructs the circulation and prevents the defensive agents of the host to reach and act upon them. The details of the process that leads to the development of these edematous zones and the reason for calling them "zones of inhibition" have been given in a former paper.⁴ Thus, Warthin found such protected colonies in the aortic arch, containing multitudes of treponemata that had remained unharmed in spite of years of the most intensive treatment. Zurhelle⁵ observed them in the pericapsular connective tissue and the trabeculae of the lymphatic glands with organisms in numbers "that could hardly be surpassed." The extent of these zones varies. They may be small and only microscopic; they may be large and voluminous, occupying, for instance, large areas in the liver.

"Zones of inhibition" sheltering more or less extensive colonies of treponemata may, however, be found also in any other place within the body wherever the soil is favorable for the formation

of non-cellular localized infiltrations,⁴ or where the circulation is poor and scanty, as in scars. They are the characteristic pathological findings in the later stages of syphilis and represent "foci of infection" whence the parasites can, and do, invade the other structures of the body should at any time generally or locally the resisting power of the host be lowered. A local decrease of resisting power is, for instance, provided at the place of trauma.⁶ The frequent development of syphilitic lesions at such places in persons with latent syphilis, who always harbor such syphilitic foci of infection, is a well established fact.

Foci of infection, whose colonies of treponemata are perfectly safe from our remedies and from all aggression on the part of the defensive mechanism of the host, are, therefore, most formidable obstacles in the treatment of cases of resistant syphilis unless we add, as adjuvants, to our specific treatment such non-specific therapeutic measures as enable us to surmount the difficulties placed in our way by the sheltered location of the pathogenic organisms. In a general way and independent of the location of the protecting zones of inhibition, this may be accomplished in the case of localized edematous infiltrations by administering glucose and draining the obnoxious fluid into the circulation.⁷ In the case of scar tissue, glucose is of less service, as the edematous reactions of the surrounding tissues are less pronounced or entirely absent. In this instance, the employment of fibrolysin is preferable, as this drug is known not only to increase the blood supply of scar tissue, but also to lead to its absorption, thus destroying the very hiding places of the organisms. If extensive scar tissue has developed in the skin, the possibility, or probability, of its hiding treponemata is greatly decreased, or removed, by giving hot baths and massage. The latter is unwittingly employed during the application of inunctions and, undoubtedly, contributes to the superior results achieved by this mode of mercurial treatment.

However, "zones of inhibition" or foci of infection can be treated more successfully if their location is known. We are, then, able to attack them directly. To find these locations is possible in many instances by a scrutinizing examination and observation of the patient in hand. Pains, existing when the patient is first seen or arising later on during the treatment in the

form of Herxheimer's reactions,⁸ curtailments of function and a fairly good knowledge of possible locations provide the clues. Only one of these "possible locations" may be mentioned here, as it is frequently involved, but is little suspected and, therefore, is constantly overlooked by physicians. This location is in the pelvic organs of the female. It is true, the inflammatory conditions of this region are due principally to gonorrheal infection. Nevertheless, on the one hand, in inflammatory pelvic conditions resistant to treatment, in which gonorrhea as the cause cannot be proven, the possibility of a syphilitic origin of these inflammatory conditions should be considered. On the other hand, in cases of resistant syphilis the female pelvic organs should be searched for a possible focus of infection.

Local applications of medical diathermy are probably the best non-specific means in support of our specific treatment to attack syphilitic foci of infection, when located. It matters not where they exist, whether in the heart, the aortic arch, the joints, the liver, the female pelvic organs or even in the central nervous system—with diathermy they can be reached at any place, if the proper technic is mastered. The increased temperature and the improvement of circulation induced by diathermy are Nature's most effective means of combating infections and bring most gratifying results under favorable conditions also in this kind of cases of resistant syphilis.

ABSTRACT AND CONCLUSIONS

The successful management of cases of resistant syphilis must be based upon the bio-pathology of each particular case. "Standardized" treatment is a failure if difficulties arise.

Antisyphilitic specifics do not kill the treponemata directly but only in conjunction with the specific ferments of the body. Therefore, in cases of resistant syphilis our first consideration should be given to the status of the ferments. Their production and activity can be stimulated by a fresh air regime, light baths, autocondensation treatments and hot water baths. Similar results can be accomplished by the injection of foreign proteins.

Resistant cases of syphilis are caused, further, by overdrugging, as in the doses employed our specifics are harmful to the inner organs. The resistance of many rebellious cases of syphilis is increased rather than diminished by the in-

tensive specific treatment usually employed under these circumstances.

A third, and the most important, reason for the development of cases of resistant syphilis is the fact that our remedies do not reach those treponemata that are entrenched in localized edematous zones, which form foci of infection. The edematous fluid of these foci can be drained into the circulation and the protected treponemata reached by the administration of glucose. Fibrolysin, hot water baths and massage are best to dislodge those organisms located in scar tissue. The best results, however, are obtained if the exact location of foci has been determined. We are, then, able to attack them directly by the application of medical diathermy. With this non-specific agency they can be reached at any place, as the increased temperature and the improvement of circulation induced by diathermy can be concentrated at any given point, even in otherwise inaccessible places such as the aortic arch and the central nervous system.

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A THEORY ON DEVIATED NASAL SEPTUM

EDWARD M. MIKKELSEN, M. D.
CHICAGO

In 1907, while a student at the University of Illinois Medical School, the question arose in the clinic of the late Dr. Wm. L. Ballenger as to the causation of deviation of nasal septum and why it usually deviates to the left.

The writer at that time presented a theory, built upon certain physiological facts, which in his opinion has sufficient soundness to be entitled to a place among the various other theories existing, which have been given space in books dealing on nasal diseases, up to the present time.

In reading what there is to be had on deviated

nasal septum, we find that the deformity is rare in primitive races and very common among Caucasians, especially among Hebrews and Romans who have the high bridged nose.

If my theory on the causation of this common

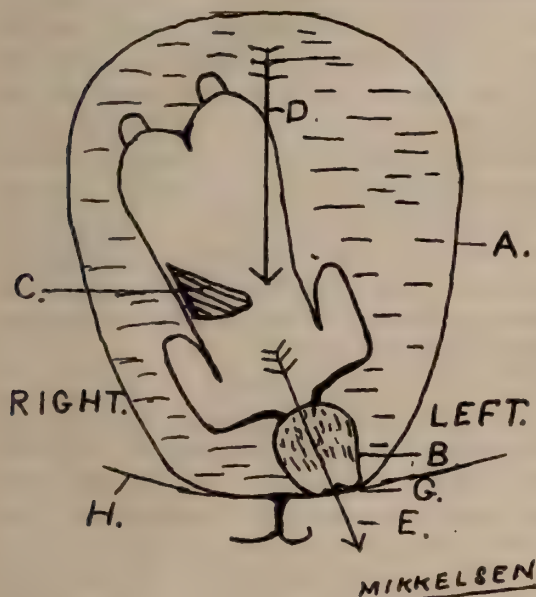


Figure 1.

- A. Uterus.
 - B. Fetal Head.
 - C. Fetal Liver throwing body out of balance in Amniotic Fluid.
 - D. Direction of Specific Gravity.
 - E. Axis of Fetus in relation to Specific Gravity.
 - G. Nose being deflected to Left, due to weight of Liver, inclining body to the Right.
 - H. Pelvic Floor.
- For a Theory on Deviated Nasal Septum, Edw. M. Mikkelsen, M. D.

defect is correct, the fact that the deformity is rare in primitive people adds strength to it. They certainly are as prone to external trauma or violence as are the highly civilized races. But the primitive man usually has a very low bridge. He usually has the saddle nose type of bridge, which sits low on the face and gets more protection as a result. Remember this fact a little further on when I expound my theory.

We are also informed from the literature that the defect does not begin to give symptoms until after the second dentition, the age of about twelve years bringing to notice most of the cases, which sooner or later require treatment.

This can be explained by the fact that the respiratory orifices of infants and the young are relatively larger per kilogram of body weight than they are in adults. Hence, between the

second dentition and puberty the lack of proper and full aeration of the body tissues begins to show and embarrass the growing organism.

There are several theories as to the causation of deviated nasal septum. Very likely all of them fit into the etiology of individual cases, for while nature is very exacting in building her organisms, she never invokes the aid of a micrometer. None of these theories explain why this deviation of the septum should occur to the left more frequently than to the right. My theory explains this phenomena in a logical manner, being based on certain physiological facts, which occur in connection with the intra-uterine life of the individual.

The causation of deviated nasal septum as mentioned in the text-books of today are summed up in the following theories: (a) Morgagni believes that excessive development of the vomer causes this bone to be cramped for space, and as a result it buckles. If this is the cause of septum deviation, it should occur as often to the right as to the left.

(b) Trendelenburg and Freeman attribute deviation of septum to a high palatal arch impinging on nasal fossa. Very few of us have high palatal, or Gothic arches, and most of us

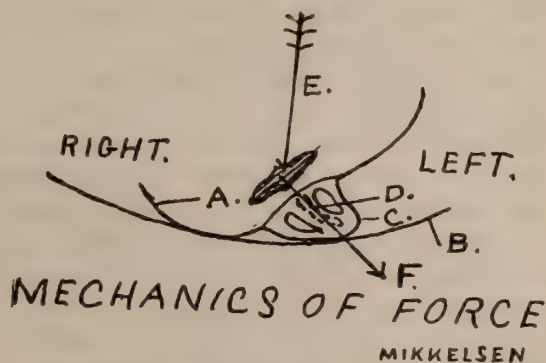


Figure 2.

- A. Fetal Head. Right Cheek.
 - B. Uterine Floor.
 - C. Distorted Nose due to downward pressure.
 - D. Bent Nasal Cartilage resulting from pressure.
 - E. Direction of Specific Gravity.
 - F. Deviation of Force exerted by Specific Gravity.
- For a Theory on Deviated Nasal Septum, Edw. M. Mikkelsen, M. D.

(78.5%) have deviated septums. Also in this theory the septum should show no more tendency towards the left than the right.

(c) Jarvis believes a faulty heredity the etiological factor.

(d) Scham and Welcker believe a faulty de-

velopment of facial bones, usually the nasal group, to be the causative factor.

(e) Bosworth says that trauma is the chief cause of deviation of nasal septum. I believe he comes nearest of all to the etiology of deviated nasal septum.

Having given a brief summary of the theories which attempt to explain the origin of this common deformity, permit me to present my belief as to the causation of most cases of deviated nasal septum and why it usually occurs to the left.

In looking up the conditions which surround the individual during intra-uterine life, I find the following physiological facts:

The fetus is suspended in the amniotic fluid, which has a specific gravity of 1.008 to 1.009. The specific gravity of the fetus ranges from 1.050 to 1.055. Head presentations occur in about 96% of all obstetrical cases. This presentation is said to be due to two factors: gravitation and accommodation.

Mathew Duncan and G. Veit in experimenting with the gravitation theory found that a dead fetus suspended in a solution having the same specific gravity as itself floats with the head down and the axis of the body obliquely to the right. This is due to the unilateral and heavy liver. (See illustrations.)

The difference between the specific gravity of the amniotic fluid and the fetus is about .04, the fetus being slightly heavier. The mechanism of this is to make fetal movements sluggish and allow ballottement of the fetus with the uterine wall to occur without hard blows. Also, it acts as a spring buffer to the fetus, when the movements of the mother are rapid and numerous. As the child is carried during the pregnancy, this ballottement occurs chiefly downward on the floor of the pelvis, where the heavy uterus rests with its burden of fetus and fluid.

I stated that the fetus floats with the head downward in about 96% of cases. I also stated earlier in this paper that the axis of the fetal body is thrown to the right, by the heavy liver, which has no organ of equal weight in the left side of body to compensate it. Hence, all ballottement which the head and nose receive during intra-uterine life are downward and the pressure incurred is on the right face, when face is presenting, and tends to force or bend the nose to the left.

The spurs and bony hypertrophies of the nasal septum are formed on the convex surface when the septum is deformed. This conforms to the laws of pathology which we can state as follows, for this deformity: "An often repeated mild stimulus or trauma leads to hypertrophy." In the case of the septum, the frequent ballottement of the fetal nose on the uterine floor, and in one direction, stretches the osteoid or cartilaginous membranes on the convex surface and relaxes them on the convex surface. The convex surface gets the greatest disturbance or stimulation, hence growth of bone or cartilage is greatest on this surface, resulting in thickening, exostoses and spurs, which in addition to septum deviation leads to occlusion of the nostril on the convex side of septum.

CONCLUSION

The light and often repeated blows struck on the fetal nose, due to ballottement on the uterine floor, during intra-uterine life, combined with the definite direction in which this trauma to the nose is directed by the weight of the fetal liver on the right side, causes the fetal nose to be forced to the left, with each ballottement. This often repeated trauma causes a set in the primitive septum, which later in life we recognize as deviated nasal septum.

"As the twig is bent, the tree inclines."

2500 Devon Ave.

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"THEN AND NOW"

In days of old when nights were cold,
And nobody raised a holler,
Our family doctor left some pills
And charged us just a dollar.
Oh give to me those days of old
When our doctor's diagnosis
Did not distort each little cold
Into incipient tuberculosis.

—C. W. in Koch's J. M.

VAIN TO THE END

Doctor No. 1: "Did you hold the mirror to her face to see if she was still breathing?"

Doctor No. 2: "Yes, and she opened one eye, gasped and reached for her powder puff."

Society Proceedings

ADAMS COUNTY

A special meeting of the Adams County Medical Society was held at the Elks' Club October 28, 1926. The meeting was called to order at 1:45 P. M. by the President. The first paper was entitled "Newer Revelations in the Pathology of Cancer" by Dr. W. C.

MacCarty, Head of Department of Surgical Pathology, Mayo Clinic, and was illustrated with lantern slides. The next paper was a discussion of the "Surgical Treatment of Exophthalmic Goiter" by Dr. J. J. Pemberton, Surgeon at the Mayo Clinic and was illustrated by lantern slides. The third paper was a discussion of the "Surgical Treatment of Gastric and Duodenal Ulcers," by Dr. W. J. Mayo and was illustrated by lantern slides.

Dr. J. A. Koch made a motion that Drs. Mayo, Pemberton and MacCarty be made Honorary Members of the Adams County Medical Society and that a rising vote of thanks be extended to them for addressing us. This was seconded and unanimously carried. Over 160 members and visitors were present.

At 6:00 P. M., at the Quincy Country Club, a banquet was extended in honor of our distinguished guests. There was music preceding and during the meal. Dr. C. D. Center acted as toastmaster. Toasts were given by Drs. H. Swanberg, E. P. Sloan of Bloomington, Carl E. Black of Jacksonville, C. Sanford of Palmyra, Mo., F. B. Dorsey of Keokuk, Ia., J. J. Pemberton and W. C. MacCarty of Rochester, Minn. Dr. W. J. Mayo in response to his toast gave an excellent talk on the cancer problem. Dr. Center proved to be a most excellent toastmaster. The arrangements for the banquet were in charge of the Entertainment Committee, Drs. Grant Irwin, Walter Stevenson and J. L. Aleshire. There was a total of 166 at the banquet, which included the wives of many of the members.

This day was a great day for the Adams County Medical Society, perhaps the greatest in our history. The attendance record was the largest we have ever had.

HAROLD SWANBERG, M. D.,
Secretary.

BUREAU COUNTY

The Bureau County Medical Society held its annual meeting at Princeton, Nov. 4, 1926, at which time the following officers were elected:

President, C. C. Barrett, Princeton; vice-president, R. E. Davies, Ladd; secretary-treasurer, F. B. Schroeder, Princeton; delegate for two years, M. N. Blackburn, Princeton; alternote, R. Herrick, Wyandot.

The Society voted to cooperate with the State Society in having the different County papers print the health notes over the signature of the County Society.

It was also voted to cooperate with the Red Cross in preparing for disaster relief.

The following program was given and greatly appreciated by all, as the talks were very instructive and showed that the doctors knew what they were talking about:

"Greetings from the State Society," E. E. Perisho, Streator, councilor of the Second District.

"Necropsy Report of Drs. Franklin and Dunn," R. E. Miltonberger.

"Recent Advances in Treatment of Pernicious Anemia," Dr. Nadler, Chicago.

"Classification and Treatment of Goitre," Dr. Bowen, Peoria.

F. EMERSON INKS, Sec.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, Nov. 3, 1926

1. Open Operation in the Treatment of Fractures, Melvin S. Henderson, Mayo Clinic, Rochester, Minn.

Discussion, Kellogg Speed, Philip Kreuscher.

2. Further Observations Concerning the Medical and Surgical Treatment of Goiter, Coleman G. Buford. Discussion, Robert Bagcock, Charles Elliott

Wesley Hospital Program, Nov. 10, 1926

1. Cases of Cretinism and Myxedema, Gerard N. Krost.

2. Cases of Pernicious Anemia, Paul Starr.

3. Gall-Bladder Cases, J. R. Buchbinder.

4. Cases of Hour-glass Stomach, John A. Wolfer.

Cook County Hospital Program, Nov. 17, 1926

The Newer Aspects of Pernicious Anemia, Pathogenesis, Experimental and Treatment, Karl K. Koessler.

Discussion, Frederick Tice.

Acute Intestinal Obstruction, Karl A. Meyer.

Discussion, William Cubbins.

Marriages

JUSTIN J. McDONALD, La Salle, Ill., to Miss Avis Pillsbury of Devils Lake, N. D., September 16.

WILLIAM S. MCGINNIS, Alton, Ill., to Miss Marguerite Kennedy of St. Louis, October 14.

JOSEPH T. O'NEIL, Marseilles, Ill., to Miss Grace Drew of Toronto, Ont., Canada, August 9.

Personals

Dr. Margaret H. Nelson has been appointed physician and health adviser at the state college at Normal.

Dr. Anny Maria Peterson Saunders is now acting director of the state psychopathic institute for research and laboratory work.

Dr. John F. Lewis, for twelve years chief physician at the Mineral Point zinc plant, DePue, has resigned.

Dean Daniels of the Graduate School, University of Illinois, delivered the first lecture of the

second medicohistorical series, which is being held in the Quine Library of the College of Medicine, on "Sir Thomas Browne and His Religio Medici."

Donald Van Slyke, Ph. D., Rockefeller Institute for Medical Research, New York, delivered the Seventh Pasteur Lecture at the Institute of Medicine of Chicago, November 19, on "Certain Aspects of the Physical Chemistry of the Blood."

Dr. Lloyd L. Arnold delivered the presidential address before the Chicago Pathological Society, John Crerar Library, November 8, on "The Normal Bacterial Mechanism of the Gastro-Intestinal Tract." Dr. Oscar T. Schultz read a paper on "Riedel's Struma of the Thyroid."

Dr. Harry L. Huber addressed the West Side Branch, Chicago Medical Society, Nov. 18, on "Hay Fever in the Chicago Area."

Dr. Morris Fishbein presented the subject, "Fads and Quackeries," before the Stock Yards Branch, Chicago Medical Society, November 11.

A dinner in honor of Dr. Melvin S. Henderson, Mayo Clinic, Rochester, Minn., was given at the Hamilton Club, Nov. 3, preceding his address before the Chicago Medical Society.

Louis A. Bowman, vice-president, American Trust & Safe Deposit Company; secretary, Illinois Society, Sons of the American Revolution, was the speaker, November 1, at luncheon of the Chicago Medical Post No. 216, American Legion.

Dr. P. S. Waters, for a number of years assistant superintendent at the Alton State Hospital, and for the last two years occupying the same position at Peoria, has returned to Alton to take up private practice.

Dr. G. Henry Mundt, President-Elect, Illinois State Medical Society, appeared during the month of October at the following places:

October 1—Edwardsville:

"Nose and Throat Infections from the Standpoint of Public Health."

October 6—Sterling:

"The Relation of the Medical Society to the Physician."

October 7—Kewanee:

"Organization Talk."

October 12—Bloomington:

"Nose and Throat Infections from the Standpoint of the General Practitioner."

October 22—American College of Physicians:
"Relation of Physical Therapy to State Medical Society."

October 26—La Salle:

"Minimum Responsibility in Public Health" and "Nose and Throat Infection from the Standpoint of the General Practitioner."

October 28—Shelbyville:

"Organization in the Seventh District."

Dr. S. E. Munson, Springfield, Ill., Councilor of the fifth district of the Illinois State Medical Society, was elected as State Governor for Illinois by the American College of Physicians at the 1926 meeting held in Detroit.

Dr. Frank Worden, a graduate of Washington University, class of 1876, has retired after 50 years of practice in Alton. Dr. Thomas Morgan of Humbolt has purchased the homestead and will continue the practice.

Mr. Edward N. Hurley, chairman of the Chicago centennial committee, has a grandiose if not grandiloquent scheme involving the building of several islands in Lake Michigan, one to be called "Health Island," for an institution to co-ordinate "all phases of medical and surgical work," to the end that complete physical examinations could be given to all comers. He proposes that the railroads give the 4,000 beds for the hospital to insure examinations of their employees. Endowments for research and fellowships and convalescent homes in the forest preserves are other visions that appeal to him. Incidentally, it is proposed that the Chicago medical colleges and universities pool their resources to make his dream come true.

Dr. Ralph H. Kuhns, Professor of Pediatrics at the Illinois Post-Graduate Medical School, Chicago, spoke at a meeting of the Sterling Woman's Club, Sterling, Illinois, November 6th, on the subject of "The Child and the Community." This lecture was one of a series to be given by Dr. Kuhns in different parts of the state under the auspices of the Lay Education Committee of the Illinois State Medical Society.

ERRATUM

Dr. R. W. Dunham, author of the article on "Pneumothorax" in November JOURNAL, calls attention to the reversal of plates 2 and 3 on pages 413-414. He states: "The printing is correct as it stands."

News Notes

—The cornerstone of the Chicago Memorial Hospital, to be erected at Thirty-Third street and the lake, in Groveland Park, was laid with appropriate ceremony, November 3.

—Representatives of the School Tuberculosis Physicians Association addressed the Chicago Tuberculosis Society, November 11, at the Brevoort Hotel.

—The *Radiological Review*, which has been published bimonthly at Quincy, will be published monthly beginning January, 1927, and the number of its pages will be increased from thirty-two to sixty-four.

—The Chicago Society of Internal Medicine at its meeting, November 22, at the City Club, studied "Hypocalcemia of Tetany" and "Hypercalcemia of Parathyroid Hormone (Collip)." W. C. Austin, Ph. D., and Drs. S. A. Matthews, W. C. Hueper, Solomon Strouse and Herbert F. Binswanger gave addresses.

—Dr. John P. Denby, Carlinville, has been re-elected president of the Illinois Tuberculosis and Public Health Association; Drs. Elmer B. Coolley, Danville, and William Marshall, Dixon, were re-elected vice-presidents; the attendance at this meeting was the largest in years, and included, among others, about 100 physicians.

—The central office of the Chicago Municipal Tuberculosis Sanitarium is now at 2049 West Washington Boulevard; telephone Seeley 4110. Construction has been started on a new \$500,000 addition to the sanatorium, Crawford and Bryn Mawr avenues, the capacity of which will be 225 beds, giving the institution a total capacity, it is reported, of about 1,200 beds.

—Mr. E. C. Yellowley, Chicago, prohibition administrator for the Illinois, Indiana and Wisconsin districts, writes that his office has discontinued the publishing of names of physicians who voluntarily consent to revocation and waive the right of hearing. The names of physicians whose licenses are revoked after hearing will continue to be made public.

—Dr. Henry Raymond Gross, who for some time has been connected with the so-called Bureau of Protective Analysis, is no longer a member of the Chicago Medical Society or of the American Medical Association. The Ethical Re-

lations Committee of the Chicago Medical Society recommended, November 9, that he be dropped from membership, and the council concurred in the recommendation.

—The members of the Buffalo Surgical Society were the guests of the Chicago Surgical Society at a dinner at the University Club, November 5; clinics were held at the Michael Reese and Wesley Hospitals; Dr. Samuel C. Plummer and Warren S. Bump spoke on "Massive Hypertrophy of the Breast"; Dr. Karl A. Meyer, "Spontaneous Perirenal Hemorrhage," and Dr. Kellogg Speed, "Recurrent Dislocation of the Shoulder."

—The Convalescent Care Committee of the Chicago Heart Association met, November 2, to consider the lack of facilities in Chicago for the care of convalescents. There are said to be less than 300 beds in Cook County for convalescents, eight-five of which are for orthopedic cases, the others for women and girls, except sixteen for boys under 8 years of age. The director of the association states that there is not a hospital bed for a man who needs convalescent care.

—Friends of the Institute for Juvenile Research, with the assistance of the public, have provided a Behavior Research Fund for the purpose of scientific study of human behavior for a period of five years. The following appointments to the Behavior Research staff have been announced:

Dr. Herman M. Adler, director.

Dr. Horace Gray, Boston, endocrinologist.

Prof. Gustav A. Jaederholm, Ph. D., University of Gothenburg, Sweden, research psychologist.

Ethel Kawin, M. A., research psychologist.

Prof. Karl S. Lashley, Ph. D., University of Minnesota, research psychologist (comparative psychology).

Prof. Louis L. Thurstone, Ph. D., University of Chicago, research psychologist.

Claude Shaw, Ph. D., University of Chicago, research sociologist.

John C. Weigel, administrator.

—At the regular meeting of the Elgin Physicians' Club, held Nov. 8, 1926, Dr. Walter Hamburger, of the Cook County Hospital, Chicago, talked on the "Heart in Thyroid." The indications for digitalis and iodine were emphasized, also the importance of quinidin as a

remedy when used cautiously. He stressed the necessity for surgical removal of the gland in most cases for complete cure of the heart condition. The subject was very well presented, and lantern slides helped in making the meeting a most interesting one.

—The following program was presented at the meeting of the Northwest Branch of the Chicago Medical Society, November 12, 1926:

"Mental defectives in relation to congenital and acquired syphilis" G. C. Kilgour

"Psychology of epilepsy" H. A. Paskind

"Some observations in the treatment of syphilis"

..... C. C. Brace

"X-Ray work in mental cases" .. Edward A. Foley
Geo. B. Underwood (Technician)

"Dental work among the insane" ... A. Goldstein

At the meeting of the North Side Branch of the Chicago Medical Society, November 4, 1926, the subject of "Birth Control" was presented by the following speakers:

"Introduction and Consideration of Some of the Medical Problems Involved"

..... Dr. Charles S. Bacon

"Social, Including Economical and Ethical Problems" Thos. Dawes Eliot, Prof. Sociology, Northwestern University.

"The Need of Birth Control as Shown by the Information Obtained by the United Charities" Joel D. Hunter, Gen'l Supt. of United Charities.

"The Illinois Law on Birth Control and Birth Control Clinics," George Packard, of Packard, Peckham and Barnes.

"Report of the Illinois Birth Control League," Mrs. Benj. Carpenter, Vice-President of the League.

Discussion by: Drs. Jno. V. Favill, William A. Pusey and Rachelle S. Yarros.

—The Illinois Trudeau Society, devoted to the clinical and scientific phases of tuberculosis, will hold its midwinter meeting, in conjunction with the Peoria Medical Society, at the Jefferson Hotel, Peoria, Illinois, Thursday, December 16th. There will be a noon luncheon and business meeting followed by a clinical program on which will appear Drs. Carl A. Hedblom, Chicago; J. J. Singer, St. Louis; Stuart Pritchard, Battle Creek, Michigan; Clarence L. Wheaton, Chicago; N. C. Gilbert, Chicago; E. P. Sloan, Bloomington, and Robert H. Hayes, Chicago.

At an evening dinner the speakers will be Dr. Alfred Henry of Indianapolis and Dr. J. R. Neal of Springfield, Chairman of the Legislative Committee of the Illinois State Medical Society. Dr. C. M. Jack of Decatur, is president of the Society and Dr. W. C. Martini of Urbana is secretary.

—The opening of a new hospital and diagnostic clinic occurred Nov. 15, 1926, under the direction of Dr. U. G. Dailey and staff. This institution, the Dailey Hospital, located at 3736 S. Michigan Avenue, is provided especially for the benefit of colored patients.

—A new, palatial convalescent home or health sanitarium, to be called Glen View Lodge is planned for next year, to be located on an estate of 27 acres on Wagner Road, 17 miles north of the Chicago loop. The plans as featured in *The Chicago Tribune* show an English Tudor structure of four stories in the form of letter "H" with separate wings for men and women. It is said that the investment represents about \$1,225,000.

Deaths

FRANCIS MARION ALLISON, Gardner, Ill.; Medical College of Indiana, Indianapolis, 1904; a Fellow, A. M. A.; aged 46; died, October 31, of complications following influenza.

HIRAM C. CASTOR, Evanston, Ill.; Medical College of Indiana, Indianapolis, 1890; served during the World War; aged 60; died suddenly, October 15, of heart disease.

JOHN MARION CHRZAN, Chicago; Chicago Medical School, 1921; aged 44; died, September 29, of cervical adenitis.

HARRIETTE A. HOWE, Chicago; Northwestern University Woman's Medical School, Chicago, 1888; aged 75; died, July 28, at Northampton, Mass., of chronic nephritis.

ELLA AMELIA LUDDEN, Chicago; Dunham Medical College, Chicago, 1901; aged 69; died, September 22, of cerebral hemorrhage.

CHARLES MOORE ROBERTSON, Waukegan, Ill.; State University of Iowa College of Medicine, Iowa City, 1888; a Fellow, A. M. A.; member of the American Academy of Ophthalmology and Oto-Laryngology, the American Laryngological, Rhinological and Otological Society and the American Otological Society; formerly assistant professor of otology, Northwestern University Medical School, Chicago; veteran of the Spanish-American and World wars; aged 61; died, October 31, at Highland Park, of peritonitis, following an appendectomy.

The New York Academy of Medicine

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